

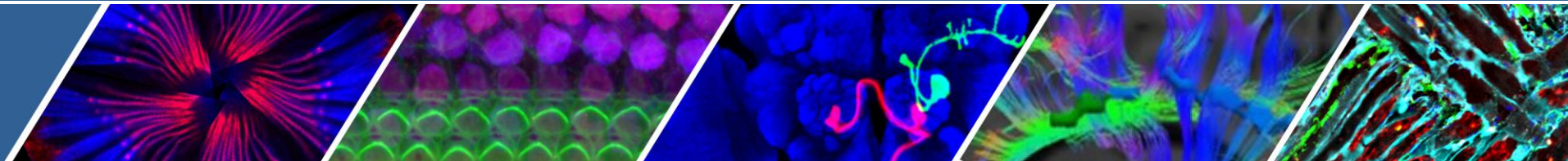
Mentorship Matters: Promoting DEIA in the NIDCD Biomedical workforce

Cendrine Robinson PhD, MPH
Chief Diversity Officer

National Institute on Deafness & Other Communication Disorders
ARO 2024



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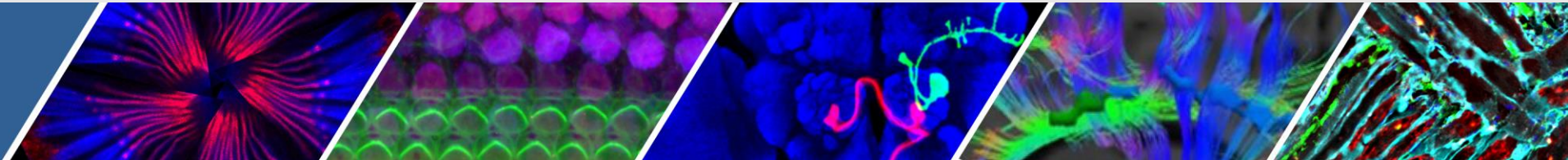


Outline of Presentation

- Disparities in the Biomedical Research Workforce
 - Gender, Race, Disability
- The Power of Mentorship
- NIDCD's Mentoring Programs



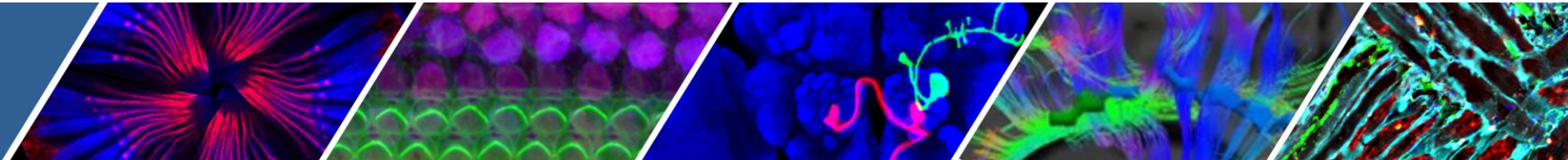
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The Leaky Pipeline



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Women Investigators and NIH funding

Women hold 41% of science and engineering doctoral degrees³



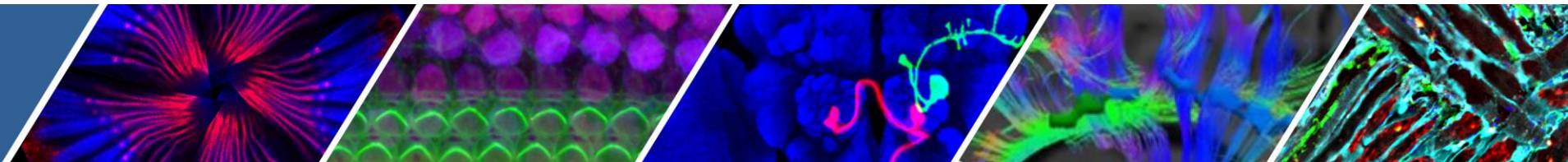
Women vs. men investigators have:

- Similar funding success rates as men¹
- Lower number of grant applications²
- Lower proportion of women faculty in the NIH investigator pool³

¹Olivera et al., 2019, NIH Office of Research on Women's Health; ²National Center for Science and Engineering Statistics, 2023

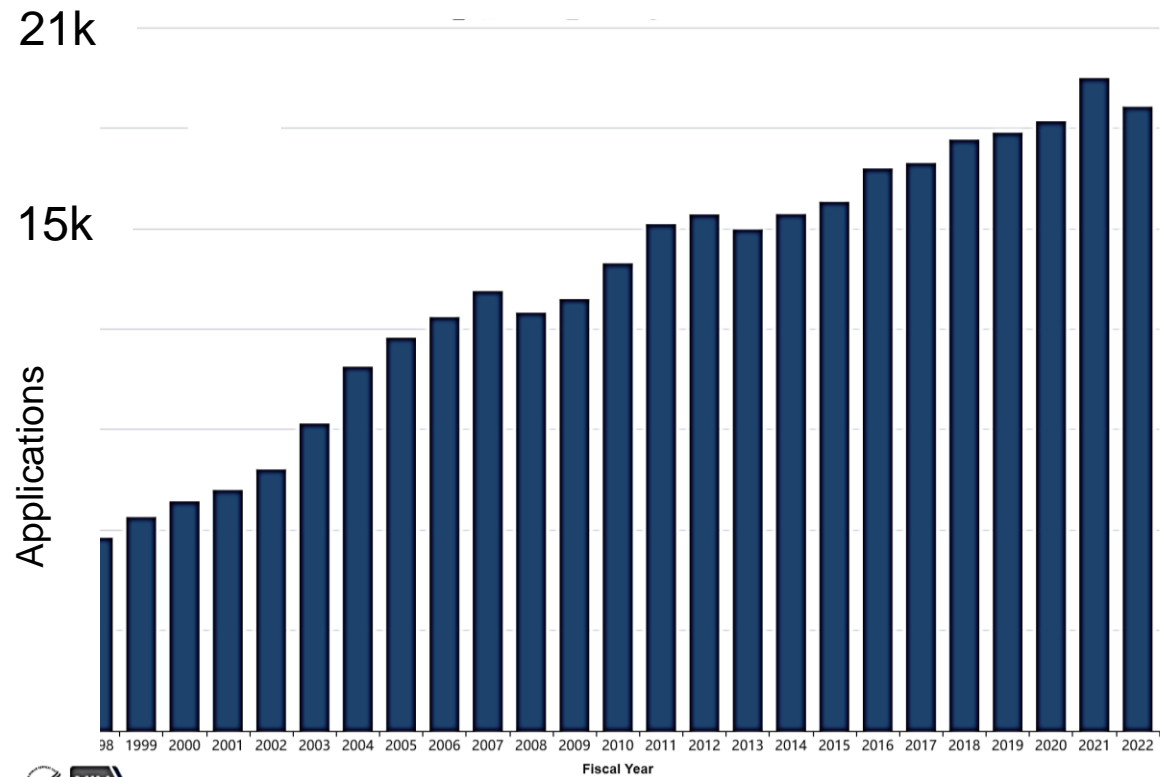


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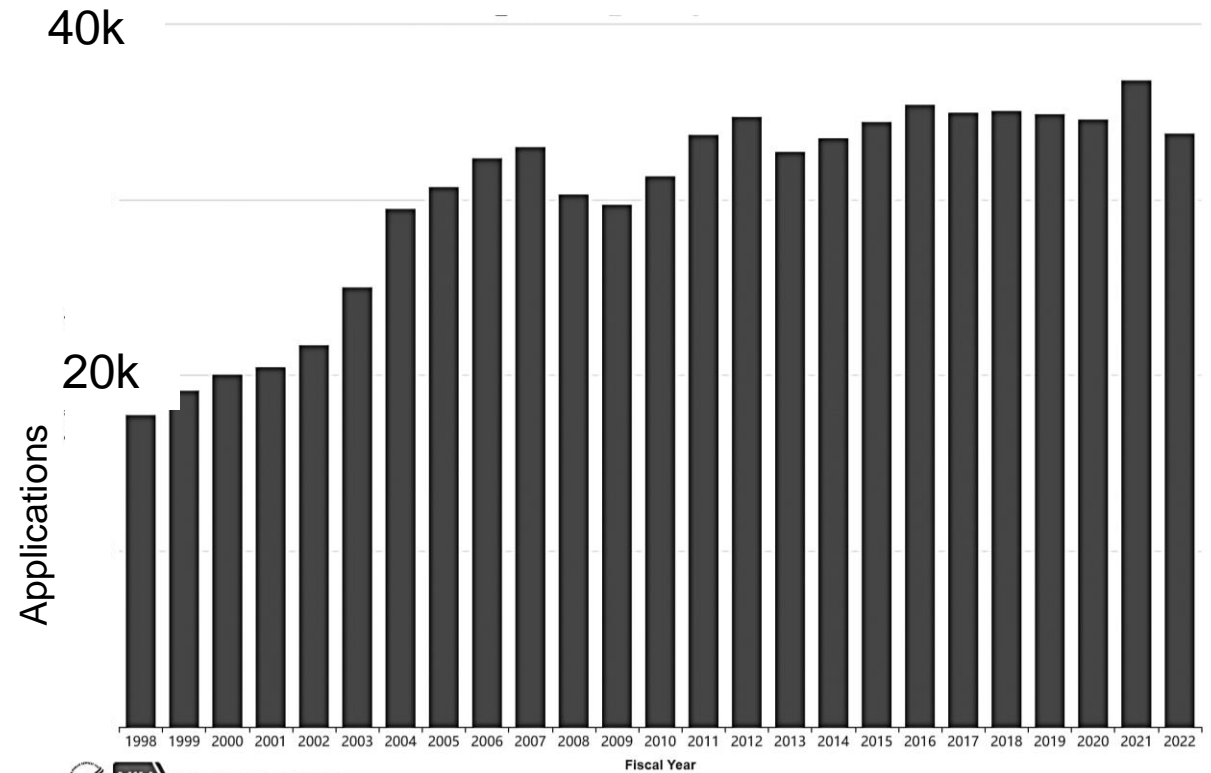


Research Project Grants: Applications by Gender

Female Applicants

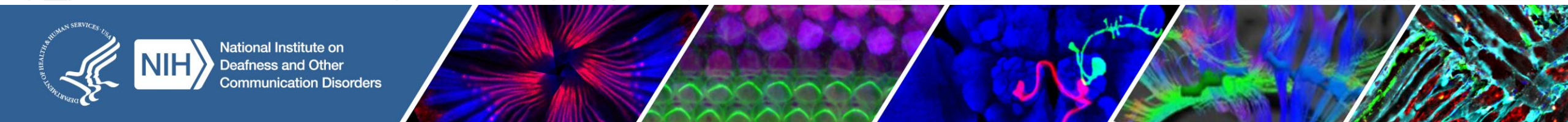


Male Applicants



Data for this report are available at NIH Data Book - <https://report.nih.gov/nihdatabook/report/132>

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Addressing Gender Disparities in NIH funding

Supporting women PIs:

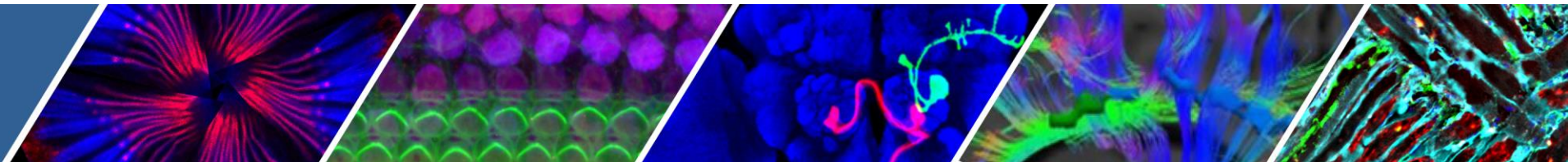
- Funding time off for parental leave
- Administrative supplement programs to promote research continuity and retention of early-career investigators ([NOT-OD-23-031](#))
- Research Supplements to Promote Re-Entry, Re-integration into, and Re-training in Health-Related Research Careers ([NOT-OD-23-170](#))



¹Olivera et al., 2019, [NIH Office of Research on Women's Health](#)



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Racial Disparities in NIH funding 2000 to 2006

Underrepresented minorities hold 16% of science and engineering doctoral degrees¹

- Success rate for applications supporting African American/Black scientists is about half that of non-Hispanic Whites²
- Topic choice contributes to the lower rate of NIH awards to African American/Black scientists³

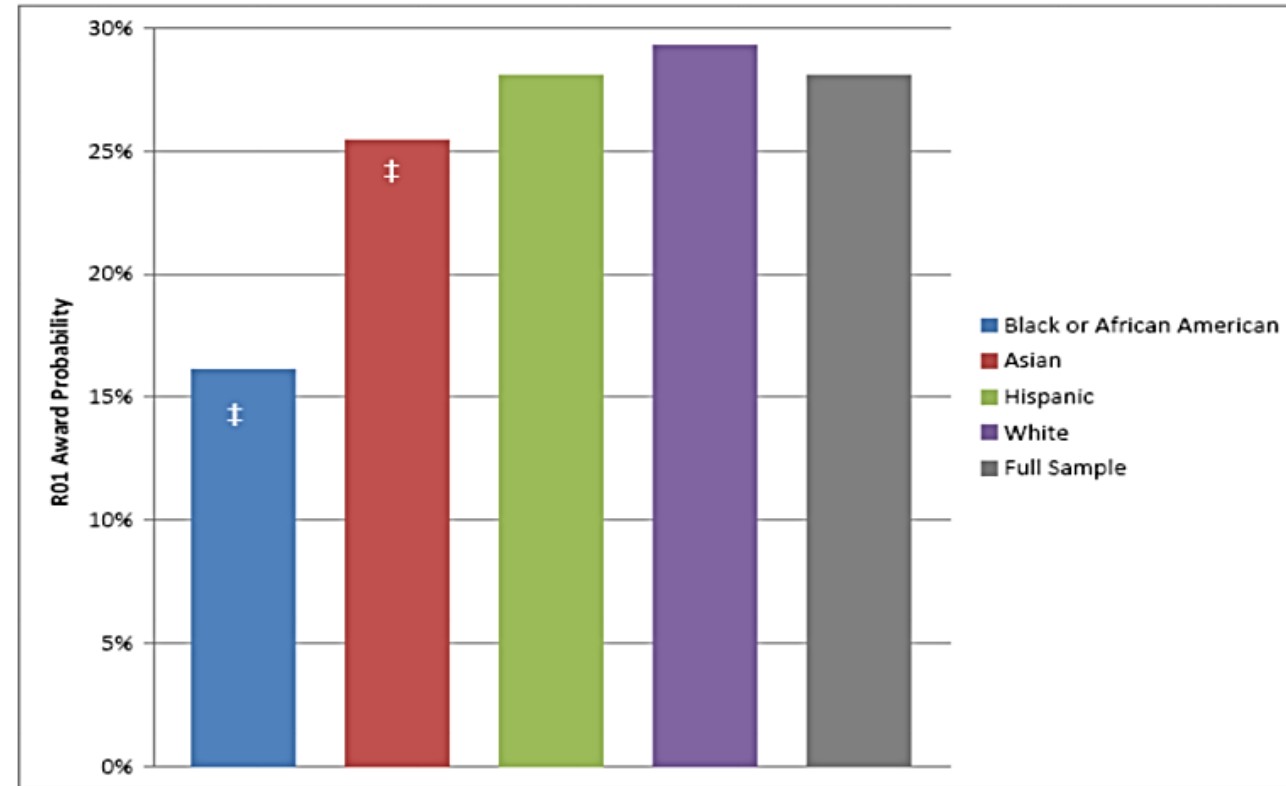


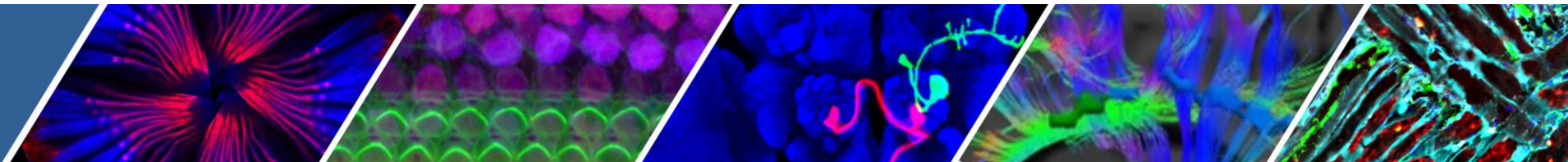
Fig. 1. Probability of NIH R01 award by race and ethnicity, FY 2000 to 2006 ($N=83,188$). Based on data from NIH IMPAC II, DRF, and AAMC Faculty Roster. ‡, $P < .001$; **, $P < .01$; *, $P < .05$.

¹National Center for Science and Engineering Statistics, 2023 ²Ginther et al, 2011;

³Hoppe et al. 2015

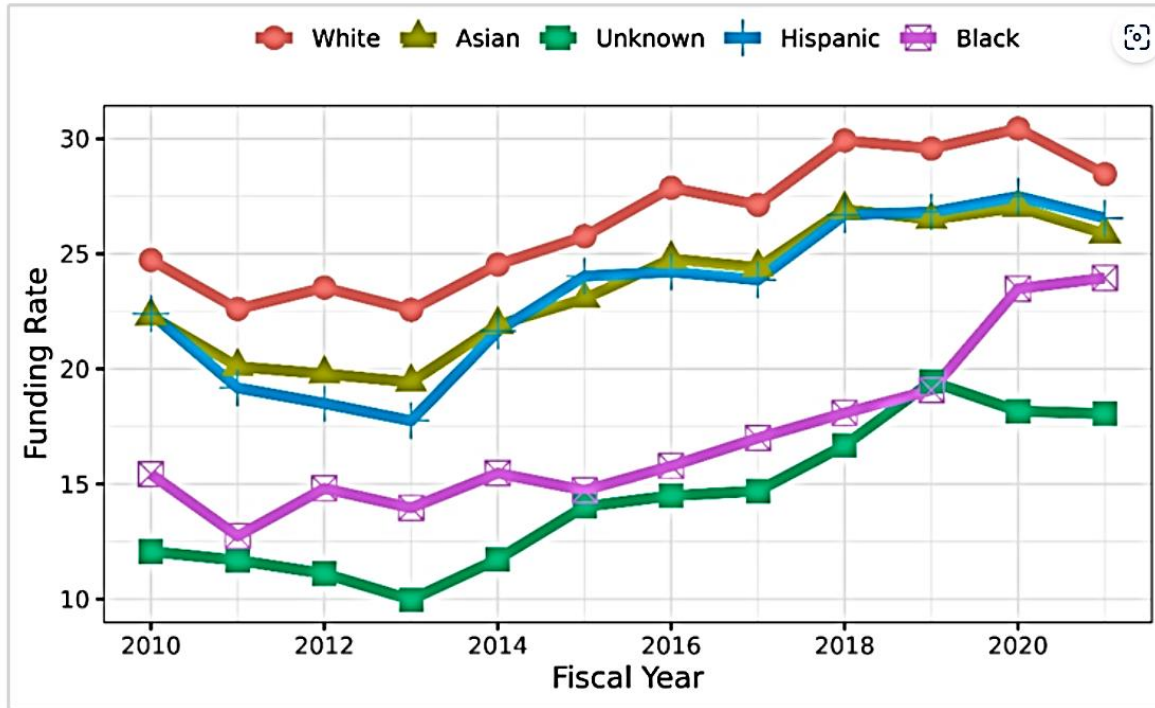


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Addressing Racial Disparities in NIH Funding 2010-2021

Figure 5: Funding rates for Type 1 Research Project Grant (RPG) Principal Investigators (PIs) 2010-2021 according to self-designated race-ethnicity.



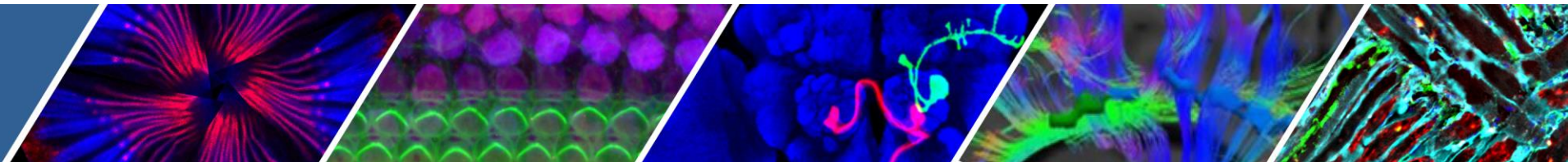
- Improvement in funding rate for Black/African American applicants
- Absolute number of self-designated Black/African American and Hispanic applicants remained low between FY2010-FY2021
- New funding opportunities: NIDCD Research Opportunities for New Investigators to Promote Workforce Diversity (RFA-DC-24-007)



[Racial Disparities in NIH Funding | SWD at NIH](#)



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NIH UNITE Initiative

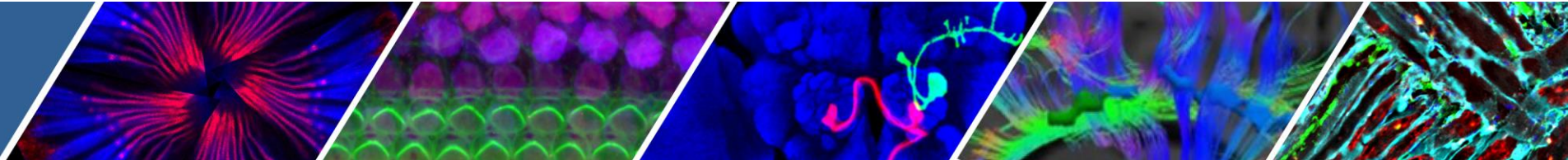


U COMMITTEE	N COMMITTEE	I COMMITTEE	T COMMITTEE	E COMMITTEE
Understand stakeholder experiences through listening and learning	Facilitate and develop new research on HD/MH	Improve the NIH culture and structure for equity, inclusion, and excellence	Foster transparency, communication, and accountability with internal and external stakeholders	Change policy, culture, and structure to promote diversity in the extramural research ecosystem

[Ending Structural Racism | National Institutes of Health \(NIH\)](#)



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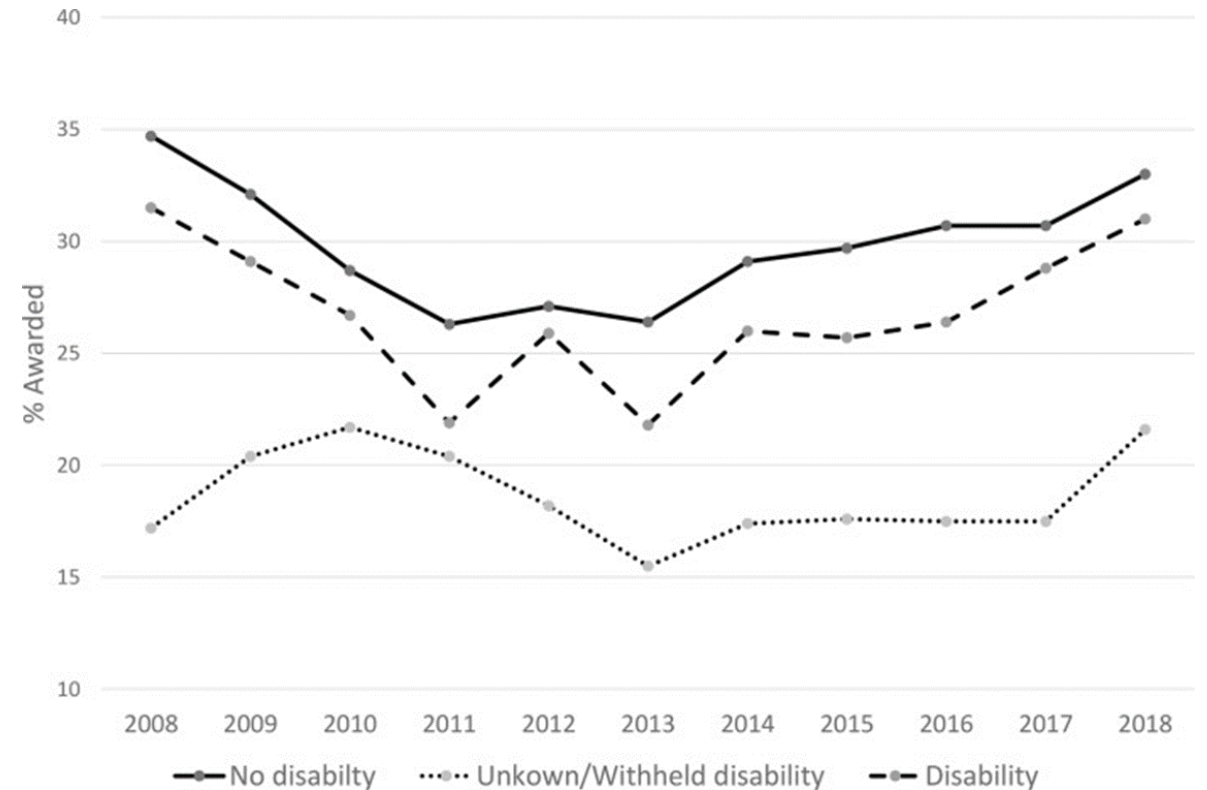


Scientific Workforce Disparities for Individuals with Disabilities

People with disabilities represent:

- 27% of U.S. population¹
- 11% of doctoral degree holders in science and engineering²
- Less than 2% of NIH-funded principal investigators³

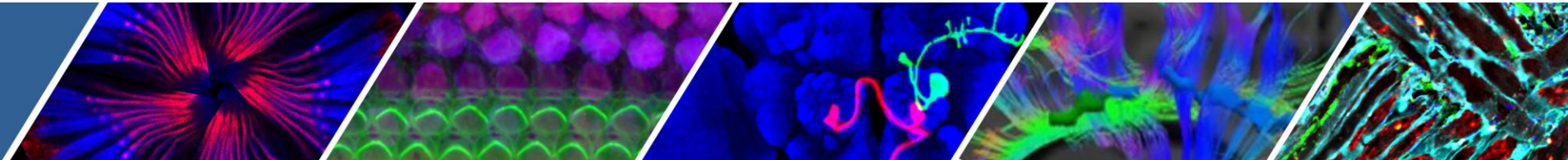
Grant success rate (% of awarded applications) among National Institutes of Health Grants by Principal Investigator Disability Status: 2008 to 2018



¹Varadaraj et al., 2021; ²National Center for Science and Engineering Statistics, 2021; ³Swenor et al. 2020;



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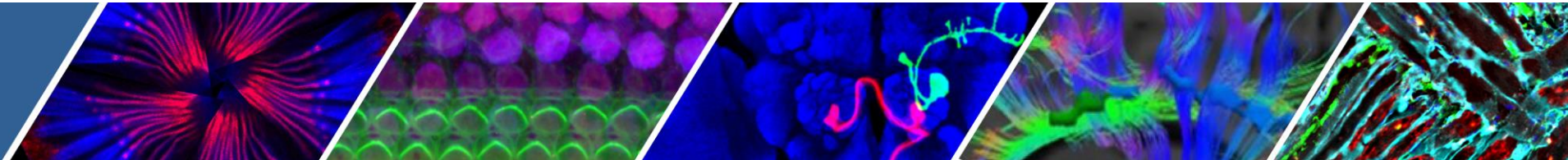
Addressing Disparities for Investigators with Disabilities

NIH Disabilities Subgroup Report:

- Re-examining NIH's mission statement to make it more inclusive
- NIH designates people with disabilities as a population with health disparities

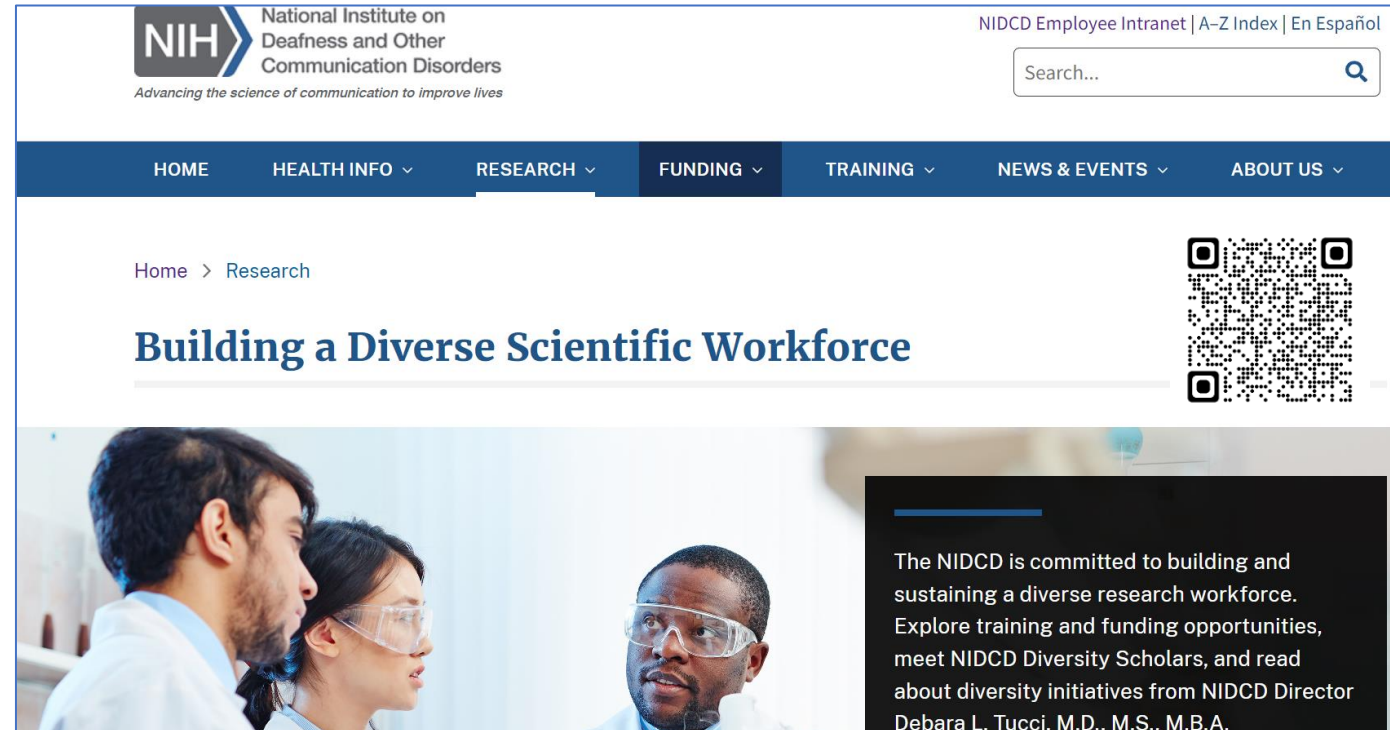


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Enhancing Diversity, Equity Inclusion and Accessibility at NIDCD

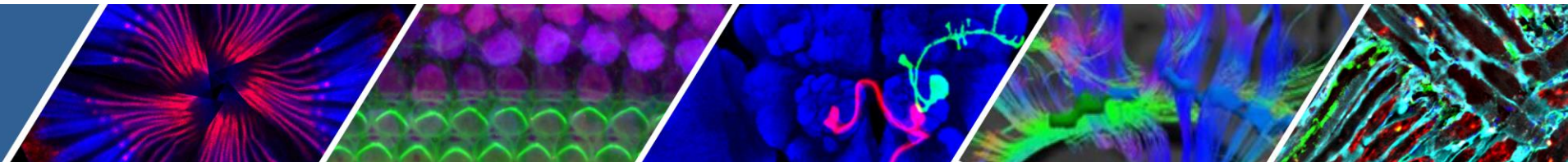
- **Assist potential grantees** through expanded communication to diverse audiences
- **Increase opportunities** to study health disparities through funding opportunities
- **Develop a diverse pipeline** through intergenerational mentorship



The screenshot displays the NIDCD website header with the NIH logo and the text 'National Institute on Deafness and Other Communication Disorders' and 'Advancing the science of communication to improve lives'. The navigation menu includes 'HOME', 'HEALTH INFO', 'RESEARCH', 'FUNDING', 'TRAINING', 'NEWS & EVENTS', and 'ABOUT US'. The main content area features a QR code and the title 'Building a Diverse Scientific Workforce'. Below the title is a photograph of three scientists in a lab setting. A text box on the right states: 'The NIDCD is committed to building and sustaining a diverse research workforce. Explore training and funding opportunities, meet NIDCD Diversity Scholars, and read about diversity initiatives from NIDCD Director Debara L. Tucci, M.D., M.S., M.B.A.'



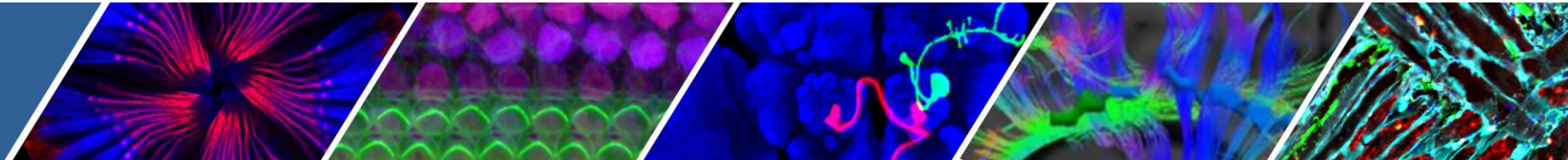
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The Power of Mentorship

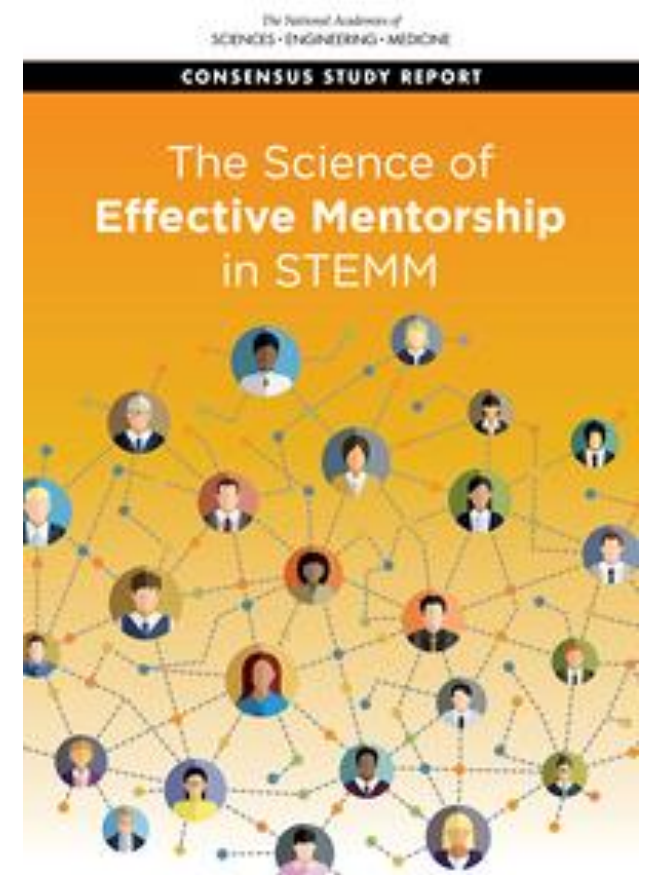


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Why Mentorship Matters

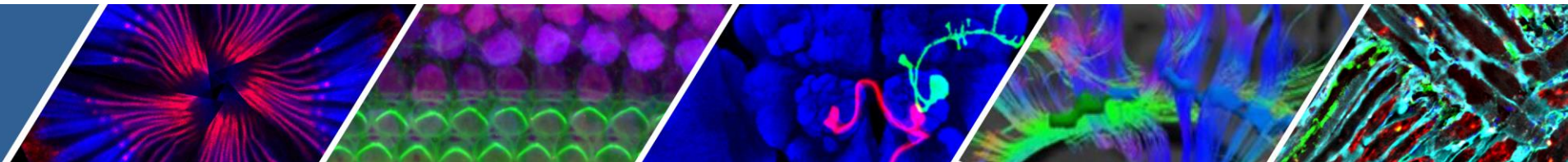
- Positive mentoring experiences increase recruitment of underrepresented mentees into graduate school and research-related career paths¹
- Women and underrepresented students are better integrated into the STEMM academic community if engaged in positive mentoring experiences²



¹Hathaway et al., 2002; Junge et al., 2010; Nagda et al., 1998; Thiry and Laursen, 2011; ²Anderson and Kim, 2006; Byars-Winston et al., 2015; Estrada et al., 2018; Felder, 2010;



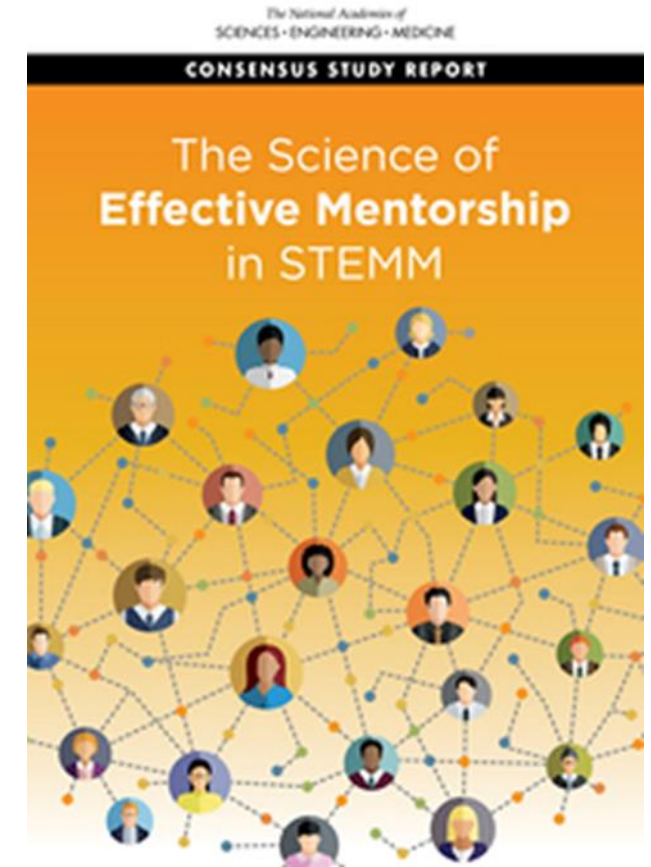
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Promoting Effective Mentorship

Shift from ad hoc membership to systems of intentional, inclusive, effective mentorship

- Mentor and mentee engage in evidence-based curricula about mentorship practices
- Culturally responsive mentorship education
- Matching mentors and mentees



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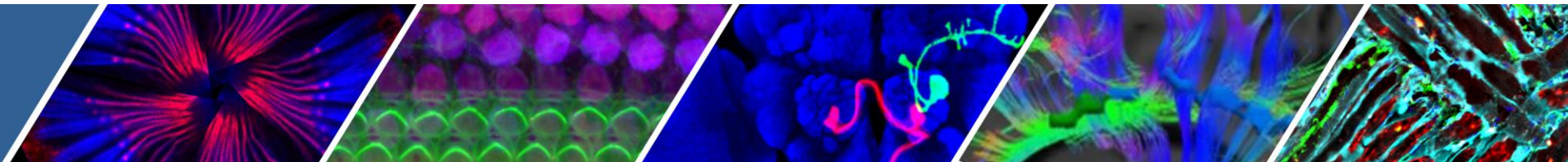
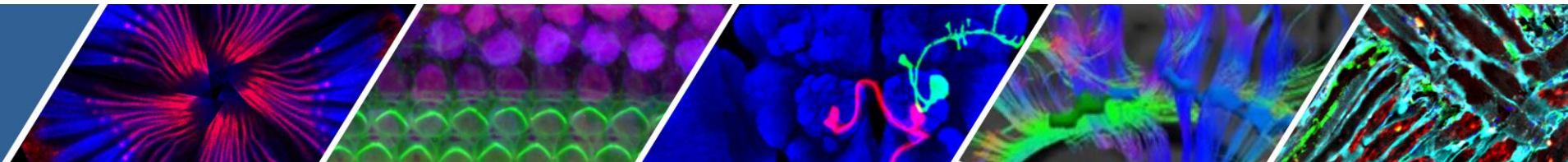




Photo Credit: Forbes India



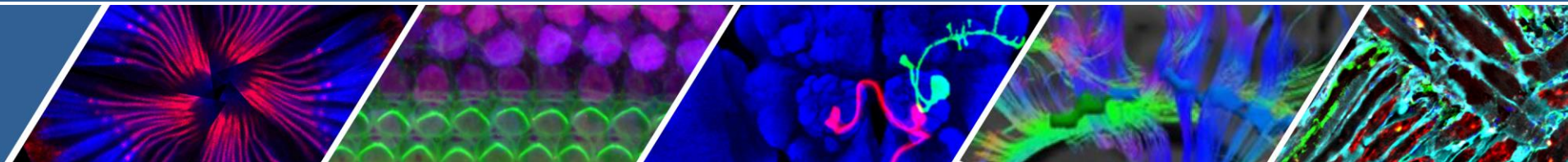
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Promoting DEIA through Mentorship in NIDCD's Extramural Program



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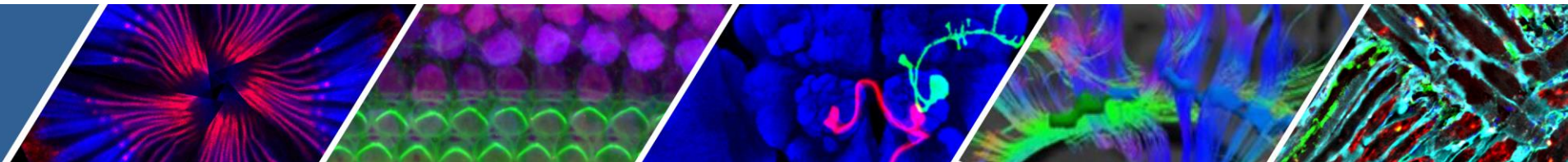
Mentorship: NIDCD Extramural Biomedical Workforce

Diversity Mentoring Networks and Research Experiences R25 program:

- Two funding opportunities released in 2021 (PAR-21-185 and PAR-21-186)
- Four grants funded by NIDCD to date
- Programs includes trainees from racial and ethnic groups underrepresented in science and trainees with disabilities



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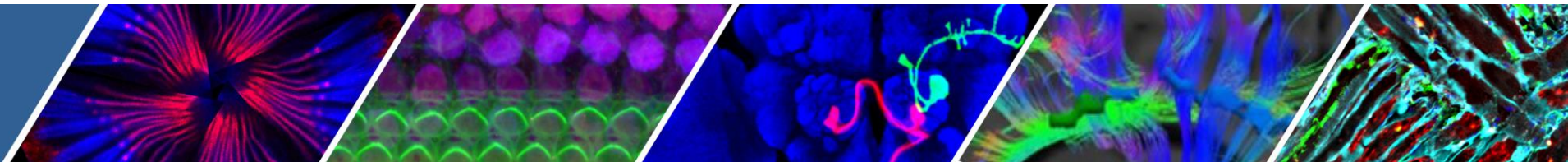
Mentorship: NIDCD Extramural Biomedical Workforce

Diversity Mentoring Networks and Research Experiences R25 Programs:

- IMPACT: Promoting Diversity and the Success of Underrepresented Minority Students in the Clinical and Research Workforce for CSD, Hampton University & Case Western Reserve University, PI: Calandruccio, Lauren
- STEMM Opportunities for College Students With Hearing Loss To Engage In Auditory Research (STEMM-HEAR), Johns Hopkins University, PI: Ratnanather, John



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Mentorship: NIDCD Extramural Biomedical Workforce

Diversity Mentoring Networks and Research Experiences R25 Programs:

- UMD-REACH, Research Equity and Access in Communication and Hearing, University of Maryland, PIs: Newman, Rochelle & Goupell, Matthew

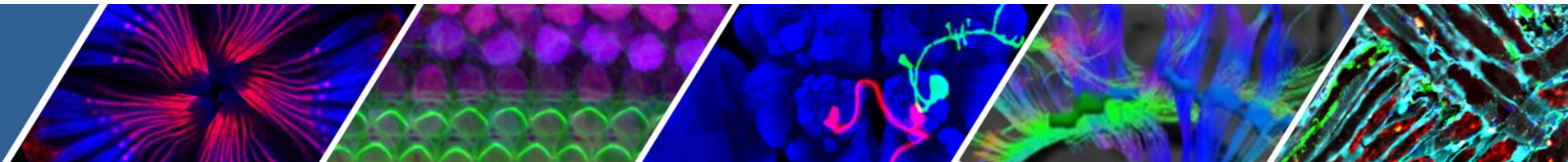


DEPARTMENT OF
HEARING AND
SPEECH SCIENCES

- SHARE CSD: An Undergraduate Summer Experience to Increase Diversity In The CSD Research Pipeline, New York University, PIs: Levi, Susannah & Arunachalam, Sudha



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Mentorship: NIDCD Extramural Biomedical Workforce

Mentoring Moments

- Webinar for Diversity Supplement Awardees
- Workshops at NBASLH with NIDCD staff and NIDCD investigators
- Outreach for future NIDCD fellowship applicants

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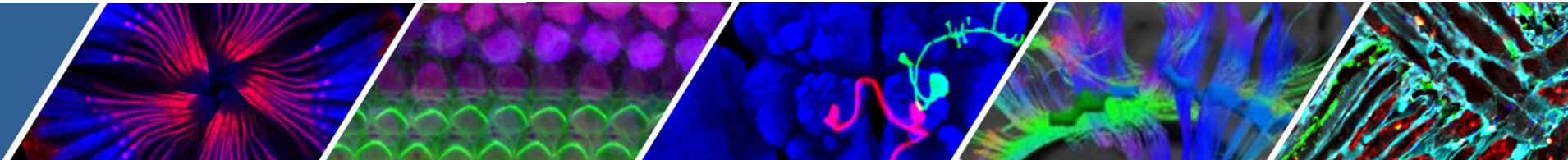
Ruth L. Kirschstein Predoctoral Individual
National Research Service Award



National Black Association
for Speech-Language and Hearing



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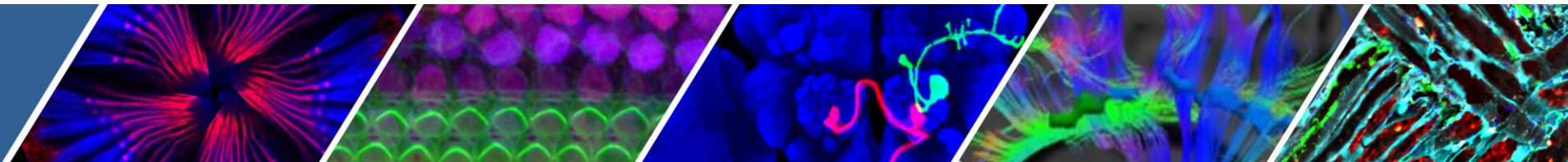


Mentorship: Extramural Trans-NIH Initiatives

- Administrative Supplements to Recognize Excellence in Diversity, Equity, Inclusion, and Accessibility (DEIA) Mentorship
 - Application **due February 16th**
- How Does Mentoring Impact Diversity in the Biomedical and Behavioral Research Workforce?
 - Scientific Workforce Diversity Seminar Series, Dr. Marie Bernard, June 14th, 2023 (available online)



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NIDCD Contacts

Extramural fellowship (F program) applicants

[Jaclyn Schurman, Au. D., Ph.D.](#), Extramural Research Training Officer for Fellowship Programs,

Extramural applicants for all other programs

(R25, T, and K programs; NIH Loan Repayment Program;
training-related administrative supplements)

[Alberto Rivera-Rentas, Ph.D.](#), Extramural Research Training Officer

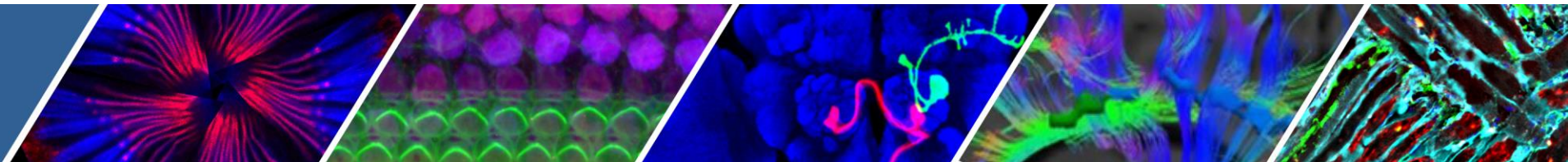
Intramural applicants

(those interested in working on the NIH campus)

[Elyssa Monzack, Ph.D.](#), NIDCD Deputy Scientific Director, with any questions



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Thank You!



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Advancing the Science of
Communication to Improve Lives

See the
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at:

<https://www.nidcd.nih.gov/about/strategic-plans>



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