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
Outline of Presentation

- Disparities in the Biomedical Research Workforce
  - Gender, Race, Disability
- The Power of Mentorship
- NIDCD’s Mentoring Programs
Women Investigators and NIH funding

Women vs. men investigators have:

- Similar funding success rates as men\(^1\)
- Lower number of grant applications\(^2\)
- Lower proportion of women faculty in the NIH investigator pool\(^3\)

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

Women hold 41% of science and engineering doctoral degrees\(^3\)
Research Project Grants: Applications by Gender

Female Applicants

- 1996: 21k
- 2022: 26k

Male Applicants

- 1996: 15k
- 2022: 20k

Applications by Fiscal Year:

- Fiscal Year: 1996
- Fiscal Year: 2022

Data for this report are available at NIH Data Book - https://report.nih.gov/nihalcoholimpact/322

Data for this report are available at NIH Data Book - https://report.nih.gov/nihalcoholimpact/322
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)

\(^1\)Olivera et al., 2019, NIH Office of Research on Women's Health
Racial Disparities in NIH funding 2000 to 2006

Underrepresented minorities hold 16% of science and engineering doctoral degrees

- Success rate for applications supporting African American/Black scientists is about half that of non-Hispanic Whites

- Topic choice contributes to the lower rate of NIH awards to African American/Black scientists

1National Center for Science and Engineering Statistics, 2023 2 Ginther et al, 2011; 3Hoppe et al. 2015

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.
Addressing Racial Disparities in NIH Funding 2010-2021

- 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)

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

### Committees

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

Ending Structural Racism | National Institutes of Health (NIH)
Scientific Workforce Disparities for Individuals with Disabilities

People with disabilities represent:

- 27% of U.S. population\(^1\)
- 11% of doctoral degree holders in science and engineering\(^2\)
- Less than 2% of NIH-funded principal investigators\(^3\)

\(^1\)Varadaraj et al., 2021; \(^2\)National Center for Science and Engineering Statistics, 2021; \(^3\)Swenor et al. 2020;
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
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 Power of Mentorship
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;
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
Promoting DEIA through Mentorship in NIDCD’s Extramural Program
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
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
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

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

Visit our website: https://www.nidcd.nih.gov

Follow NIDCD Twitter: @NIDCD

Follow NIDCD Facebook: @NIDCDgov

See the 2023-2027 NIDCD Strategic Plan at:
https://www.nidcd.nih.gov/about/strategic-plans