



National Eye Institute
Research Today...Vision Tomorrow

National Eye Institute: DEIA Data

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NEI-ARVO Session: Value of DEIA in Vision Research
ARVO Annual Meeting
April 23, 2023
No active financial disclosures

What is the National Eye Institute?

- 1968: Congress & President Lyndon Johnson → branch of NIH to manage national efforts in vision science
- Largest funder of eye health and vision science in US (FY2023 budget appropriation: \$896.5M)
- ~1800 grants & training awards, ~270 medical centers, hospitals, universities [44 states & worldwide]
- 722 employees, intramural 23 labs/6 core facilities
- Nearly 1,500 NEI-supported abstracts at ARVO 2023
- Partner with eye & vision community: research, clinical care, patient and professional organizations...



Revised NEI Mission Statement: First Since 1968

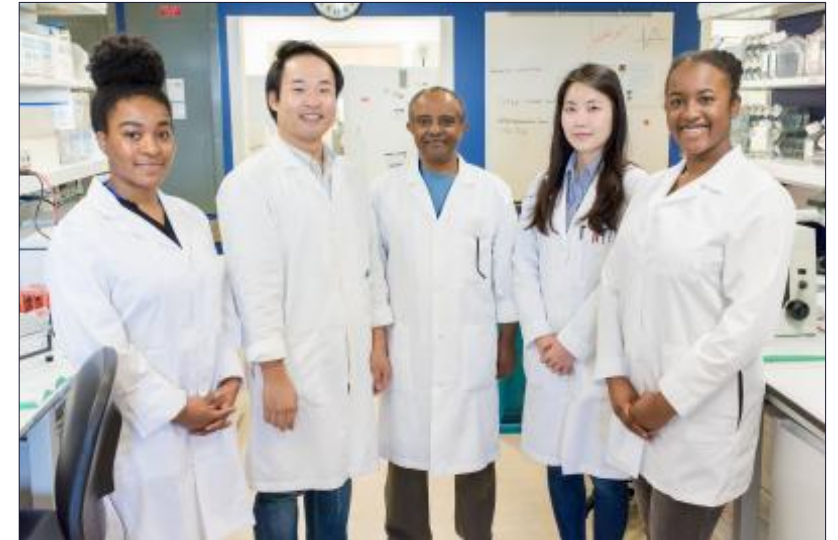
The mission of the National Eye Institute is to eliminate vision loss and improve quality of life through vision research. To achieve this mission, NEI provides leadership to:

- Drive innovative research to understand the eye and visual system, prevent and treat vision diseases, and expand opportunities for people who are blind or require vision rehabilitation
- Foster collaboration in vision research and clinical care to develop new ideas and share knowledge across other fields
- Recruit, inspire, and train talented and diverse individuals to expand and strengthen the vision workforce
- Educate health care providers, scientists, policymakers, and the public about advances in vision research and their impact on health and quality of life.



Why Does Diversity Matter for Science?

- “Recruit, inspire, and train talented & diverse individuals to strengthen the vision workforce”
 - Benefits of **interdisciplinary research**: major innovations
 - Evidence that teams with **different kinds of thinkers** outperform homogeneous groups, improved problem solving & innovation
 - May have **stronger perspective** on understanding role of social determinants of health & other factors in health outcomes
 - Eye diseases often affect **vulnerable populations** disproportionately: benefits of deeper familiarity, improved trust
- NEI needs to work with **entire community** to address (academia, professional orgs, community workers, industry)



Ginther DK, et al. Science 2011; 333 (6045): 1015-9.

Page SE. The Diversity Bonus: How Great Teams Pay Off in the Knowledge Economy, 2017

Swartz TH et al. J Infect Dis 2019;220(220 Suppl 2):S33-S41.

Fairless EA, et al. Ophthalmology. 2021; S0161-6420 (21) 00012-9.



Where is the Vision Field (Ophthalmology Workforce)?

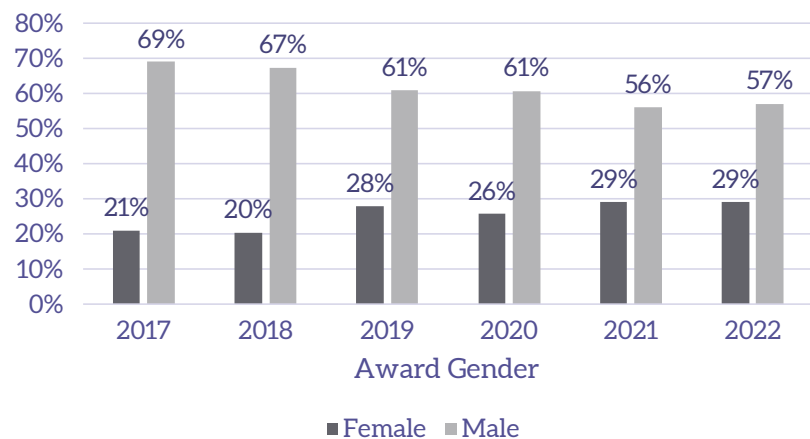
Race and Ethnicity	Percentage of All US Practicing AAO Members	Percentage of US AAO Members in Training	Percentage in the General US Population ^a
White	58.1	44.3	57.8
Asian/Pacific Islander	17.7	30.7	6.1
Hispanic	4.1	6.7	18.7
Black	2.7	3.7	12.1
Native American/Alaska Native	0.2	0.5	0.7
Other ^b	0.1	0.2	4.6
Declined to state	17.1	13.9	-



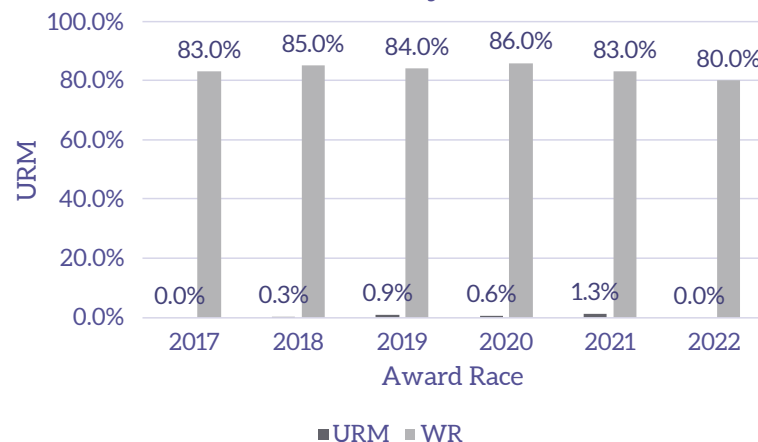
Woreta, Gordon, Knight, Randolph, Zebardast, Perez-Gonzalez. *Ophthalmology* 2022; 129:e127-e136.
 Fairless, Nwanyanwu, Forster, Teng. *Ophthalmology* 2021; 128:1129-34.

NEI RPG Awards: Gender, Race, Ethnicity (2017-2022)*

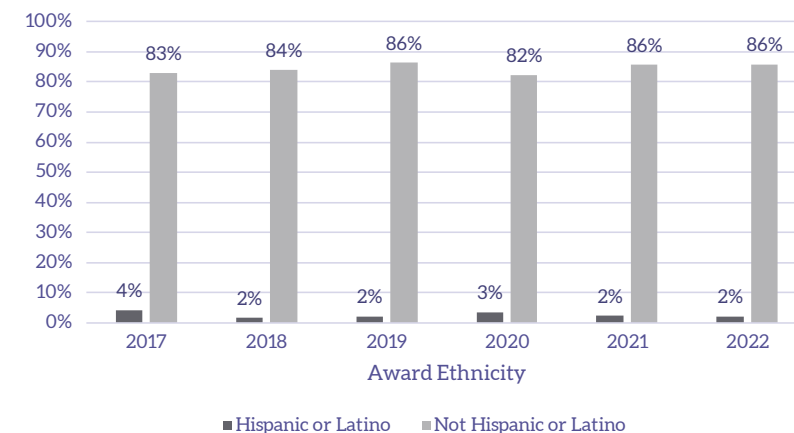
RPG awards by gender



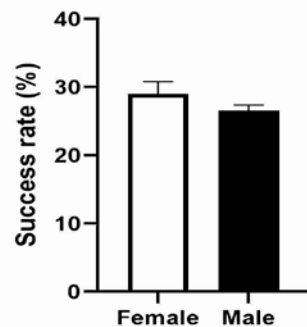
RPG awards by race



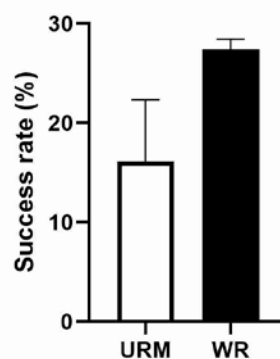
RPG awards by ethnicity



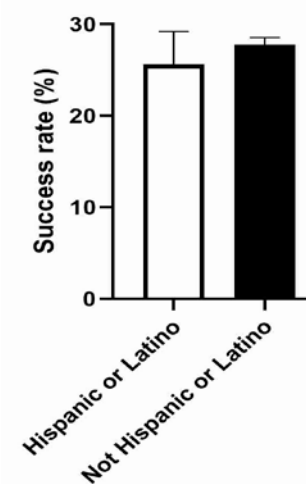
Average RPG success rates by gender over six-years in total



Average RPG success rates by race over six-years in total



Average RPG success rates by ethnicity over six-years in total



*Excludes mixed and unknown groups

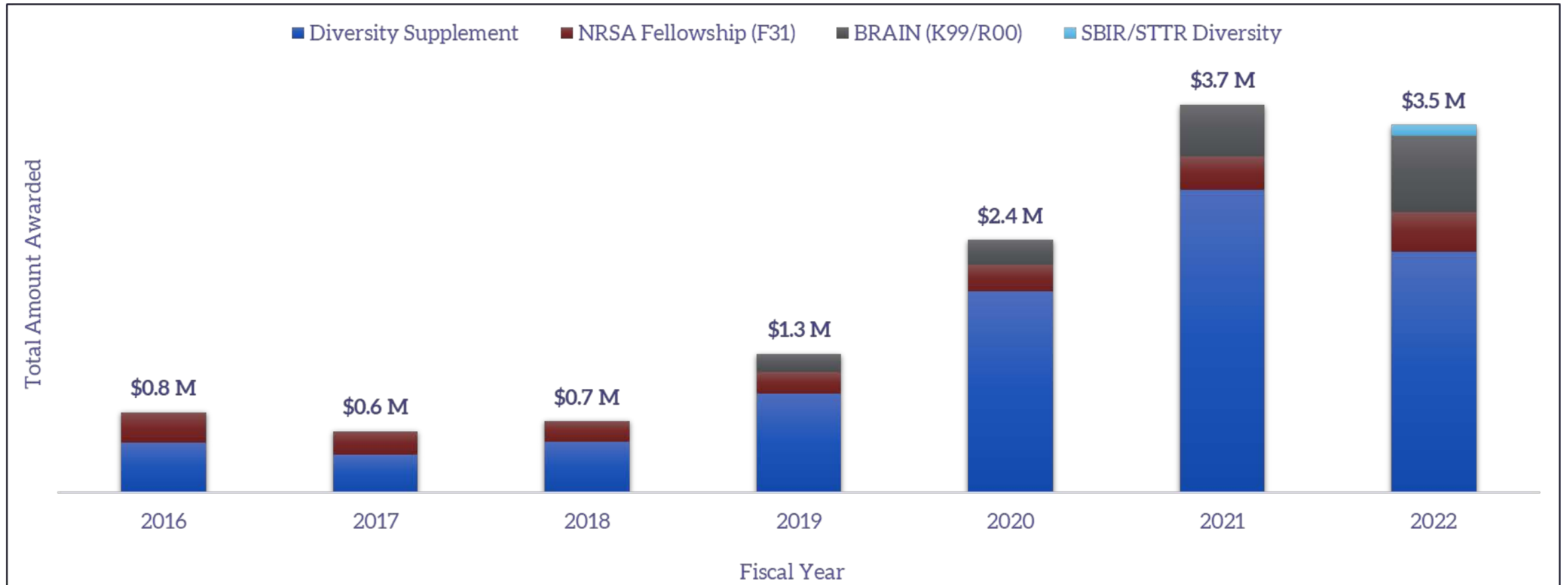


NEI: Funding Opportunities in DEIA

	Title	NOFO Number	Activity Code
1	Ruth L. Kirschstein National Research Service Award (NRSA) Individual Predoctoral Fellowship to Promote Diversity in Health-Related Research	PA-21-052	F31
2	NIH Blueprint and BRAIN Initiative Diversity Specialized Predoctoral to Postdoctoral Advancement in Neuroscience (D-SPAN) Award	RFA-NS-21-012	F99/K00
3	Maximizing Opportunities for Scientific and Academic Independent Careers (MOSAIC) Postdoctoral Career Transition Award to Promote Diversity	PAR-21-271	K99/R00
4	BRAIN Initiative Advanced Postdoctoral Career Transition Award to Promote Diversity	RFA-MH-23-331	K99/R00
5	Research With Activities Related to Diversity (ReWARD)	PAR-23-122	R01
6	Research Opportunities for New and "At-Risk" Investigators to Promote Workforce Diversity	PAR-22-181	R01
7	Research Supplements to Promote Diversity in Health-Related Research	PA-21-071	Admin Supp
8	Administrative Supplements to Promote Diversity in Small Businesses-SBIR/STTR	PA-21-345	Admin Supp
9	Notice of Special Interest to Encourage Eligible NIH HEAL Initiative Awardees to Apply for PA-21-071 Research Supplements to Promote Diversity in Health-Related Research	NOT-NS-20-107	Admin Supp
10	Notice of Special Interest to Encourage Eligible NIH BRAIN Initiative Awardees to Apply for PA-21-071: Research Supplements to Promote Diversity in Health-Related Research	NOT-NS-22-012	Admin Supp



NEI DEIA Funds Awarded by Fiscal Year



NEI Diversity Supplement Awards

Fiscal Year	Number of Awards	Total Amount Awarded	Average Awarded Amount
2016	7	\$471,933	\$67,419
2017	7	\$360,852	\$51,550
2018	10	\$486,896	\$48,690
2019	14	\$935,800	\$66,843
2020	26	\$1,911,118	\$73,505
2021	39	\$2,867,192	\$73,518
2022	34	\$2,296,360	\$67,246



NEI Diversity Fellowship (F31) Awards

Fiscal Year	Number of Awards	Total Amount Awarded	Average Awarded Amount
2016	8	\$289,583	\$36,198
2017	6	\$222,769	\$37,128
2018	5	\$191,787	\$38,357
2019	6	\$209,524	\$34,921
2020	6	\$250,533	\$41,756
2021	8	\$322,302	\$40,288
2022	9	\$372,798	\$41,422



NEI BRAIN Diversity (K99/R00) Awards

Fiscal Year	Number of Awards	Total Amount Awarded	Average Awarded Amount
2019	2	\$170,251	\$85,126
2020	2	\$233,809	\$116,905
2021	3	\$490,681	\$163,560
2022	5	\$722,731	\$144,546



NEI SBIR/STTR Diversity Supplement Awards

Fiscal Year	Number of Awards	Total Amount Awarded	Average Awarded Amount
2022	1	\$105,300	-



NEI Council: Gender, Ethnicity, Race

	Gender		Ethnicity		Race		
	Male	Female	Non-Hispanic	Hispanic	Asian	Black	White
2019	58%	42%	67%	33%	8%	0%	92%
2020	50%	50%	67%	33%	17%	0%	83%
2021	50%	50%	75%	25%	17%	8%	75%
2022	50%	50%	75%	25%	17%	8%	75%
2023	58%	42%	75%	25%	17%	8%	75%



NEI Funding Opportunities: NIMHD Sign-On

- PAR-22-145: Leveraging **Health Information Technology** (Health IT) to Address and Reduce Health Care Disparities (R01 Clinical Trial Optional)
- PAR-22-092: Health Care Models for Persons with **Multiple Chronic Conditions** from Populations that Experience Health Disparities: Advancing Health Care towards Health Equity (R01 - Clinical Trials Optional)
- PAR-23-112: Addressing the Impact of **Structural Racism and Discrimination** on Minority Health and Health Disparities (R01 - Clinical Trial Optional)
- PAR-22-072: **Measures and Methods** to Advance Research on Minority Health and Health Disparities-Related Constructs (R01 Clinical Trial Not Allowed)
- PAR-22-064: **Patient-Clinician Relationship**: Improving Health Outcomes in Populations that Experience Health Care Disparities (R01 Clinical Trial Optional)



Opportunities: NEI Reviewer & Student Training

■ NEI Clinician Scientist Reviewer Program

- **Increase pool of early-career clinician scientists** to serve as reviewers for NEI → meet NEI staff, learn process, write better grants
- Clinician scientists from diverse backgrounds & underrepresented groups are encouraged to apply
- Positive feedback

■ Diversity in Vision Research & Ophthalmology

- Summer 2011-2022: 90 interns (34 men, 56 women)
- Contact: Cesar E. Perez-Gonzalez, PhD (cesarp@nei.nih.gov)



NEI Eye on the Future: Engaging Teens

- Video competition invites diverse high-school students to create a 3-minute video communicating science
- Winners receive cash prizes & a trip to NIH this summer for a day of learning, networking, fun...



Concluding Thoughts

- **Diversity** as key part of NEI's mission: "recruit, inspire, and train talented and diverse individuals"
- **Challenges with status quo** (racial, ethnic, gender, accessibility): numerous programs through NEI Strategic Plan beginning to address
- Need to improve **pipeline of younger trainees**
- NEI needs to work with the **entire community** to address these challenges: academia, professional organizations, industry, educators

