

Confronting the barriers to representation in the biomedical research workforce

**Alison Gammie
Director of Training, Workforce
Development and Diversity
March 22, 2021**



Disclaimer

The opinions expressed in this talk are the author's own and do not reflect the view of the National Institutes of Health, the Department of Health and Human Services, or the United States government.

Structural Elements in Academia Contributing to Racism and Sexism

Student Level

- Admissions
- Pedagogical Methods
- Financial Burden and Student Debt
- Time to Independence

Postdoctoral and Faculty Level

- Hiring Practices
- Resource Allocation
- Tenure and Promotion

All Levels

- Mentoring and Networking
- Climate and Culture
- Research Incentive Structure



Admissions: standardized tests have race/ethnicity, gender and socio-economic biases and are not predictive of success

Published: 11 June 2014

A test that fails

Casey Miller & Keivan Stassun

Nature **510**, 303–304(2014) | [Cite this article](#)

7602 Accesses | 60 Citations | 745 Altmetric | [Metrics](#)

The GRE over the entire range of scores lacks predictive ability for PhD outcomes in the biomedical sciences

Linda Sealy , Christina Saunders, Jeffrey Blume, Roger Chalkley

Published: March 21, 2019 • <https://doi.org/10.1371/journal.pone.0201634>

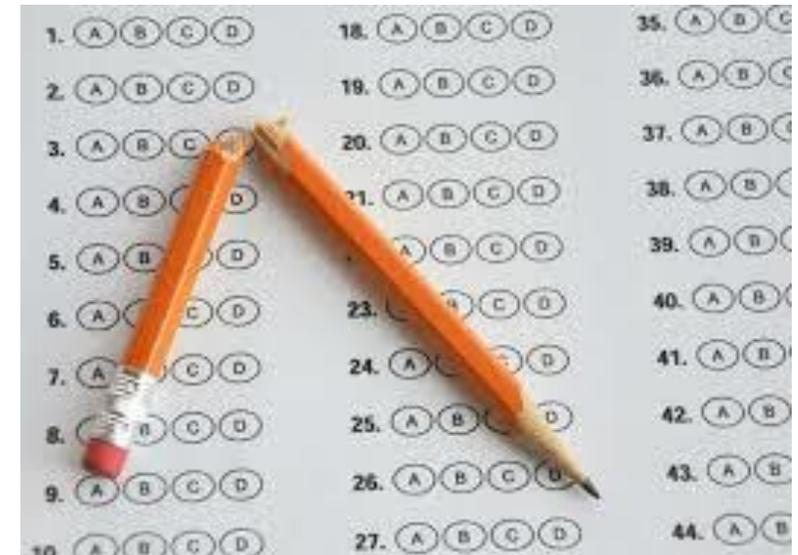
[See the preprint](#)

The GRE fails to identify students that will graduate and hurts diversity

Date: January 29, 2019

Source: Rochester Institute of Technology

Summary: A team of researchers discovered that traditional admissions metrics for physics Ph.D. programs such as the Graduate Record Examination (GRE) do not predict completion and hurt the growth of diversity in physics.



Focusing on grades and standardized tests for admissions ignores the biases in our educational system

- In 2015, NIH dropped the GRE from the Training Data Tables
- In 2017, NIGMS' training FOAs requested information about the application process and encouraged approaches that go beyond GPA and standardized tests.
- In 2020, NIGMS began the process of removing from all FOAs the NIH Training Table requiring the GPA average of the applicants and matriculants.

Why is There a Racial Achievement Gap?

🕒 November 16, 2018 👤 stevenmsinger 📁 #BlackLivesMatter, Accountability, Betsy DeVos, Budget, capitalism, Charter Schools, Civil Rights, Corporate Education "Reform", Education, Eugenics, Healthcare, immigration, Learning, NAACP, Philosophy, Politics, Poverty, Prejudice, privatization, Propaganda, Racism, School Choice, School Funding, school segregation, School to Prison Pipeline, school vouchers, Schools, segregation, Social Justice, Standardized Testing, Students, Teachers, Toxic Testing 🔖 Charles Murray and Richard Herrnstein, charter schools, Dinesh D'Souza, Eugenics, high stakes testing, history, Politics, prejudice, racial achievement gap, racism, school vouchers, standardized testing, test-based accountability, The Bell Curve, The End of Racism



Grad School Without the GRE

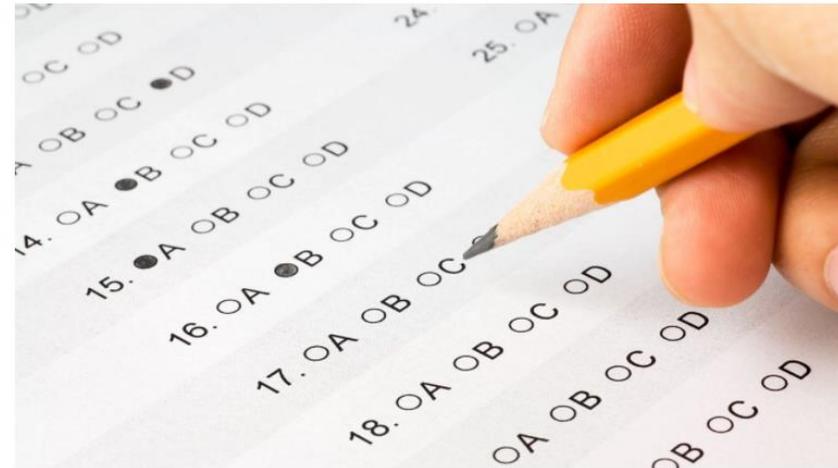
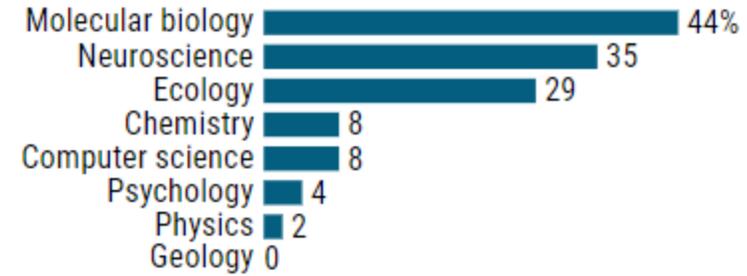
Brown follows Princeton in letting departments decide whether to require the admissions test. Twenty-four of them opt out.

By [Scott Jaschik](#) // October 7, 2019



GRExit snapshot

Percent of programs at 50 top-ranked U.S. research universities that didn't require GRE general scores in 2018. (Programs in some disciplines weren't offered at all universities.)



ISTOCK.COM/BLUESTOCKING

A wave of graduate programs drops the GRE application requirement

By [Katie Langin](#) | May. 29, 2019, 4:25 PM

Pedagogical Methods Need to Be Evidence-Informed

RESEARCH ARTICLE

Active learning narrows achievement gaps for underrepresented students in undergraduate science, technology, engineering, and math

Elli J. Theobald, Mariah J. Hill, Elisa Tran, Sweta Agrawal, E. Nicole Arroyo, Shawn Behling, Nyasha Chambwe, Dianne Laboy Cintrón, Jacob D. Cooper, Gideon Dunster, Jared A. Grummer, Kelly Hennessey, Jennifer Hsiao, Nicole Iranon, Leonard Jones II,  Hannah Jordt, Marlowe Keller, Melissa E. Lacey, Caitlin E. Littlefield, Alexander Lowe, Shannon Newman, Vera Okolo, Savannah Olroyd, Brandon R. Peacock, Sarah B. Pickett, David L. Slager, Itzue W. Caviedes-Solis, Kathryn E. Stanchak, Vasudha Sundaravardan, Camila Valdebenito, Claire R. Williams, Kaitlin Zinsli, and  Scott Freeman

PNAS March 24, 2020 117 (12) 6476-6483; first published March 9, 2020; <https://doi.org/10.1073/pnas.1916903117>

Edited by Susan T. Fiske, Princeton University, Princeton, NJ, and approved February 7, 2020 (received for review September 27, 2019)



NEWS | ADVICE | THE REVIEW | DATA |

JANUARY 16, 2020

From: Beth McMurtrie

Subject: Do Gateway Courses Foster Inequity?



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How to Narrow Achievement Gaps for Underrepresented Students

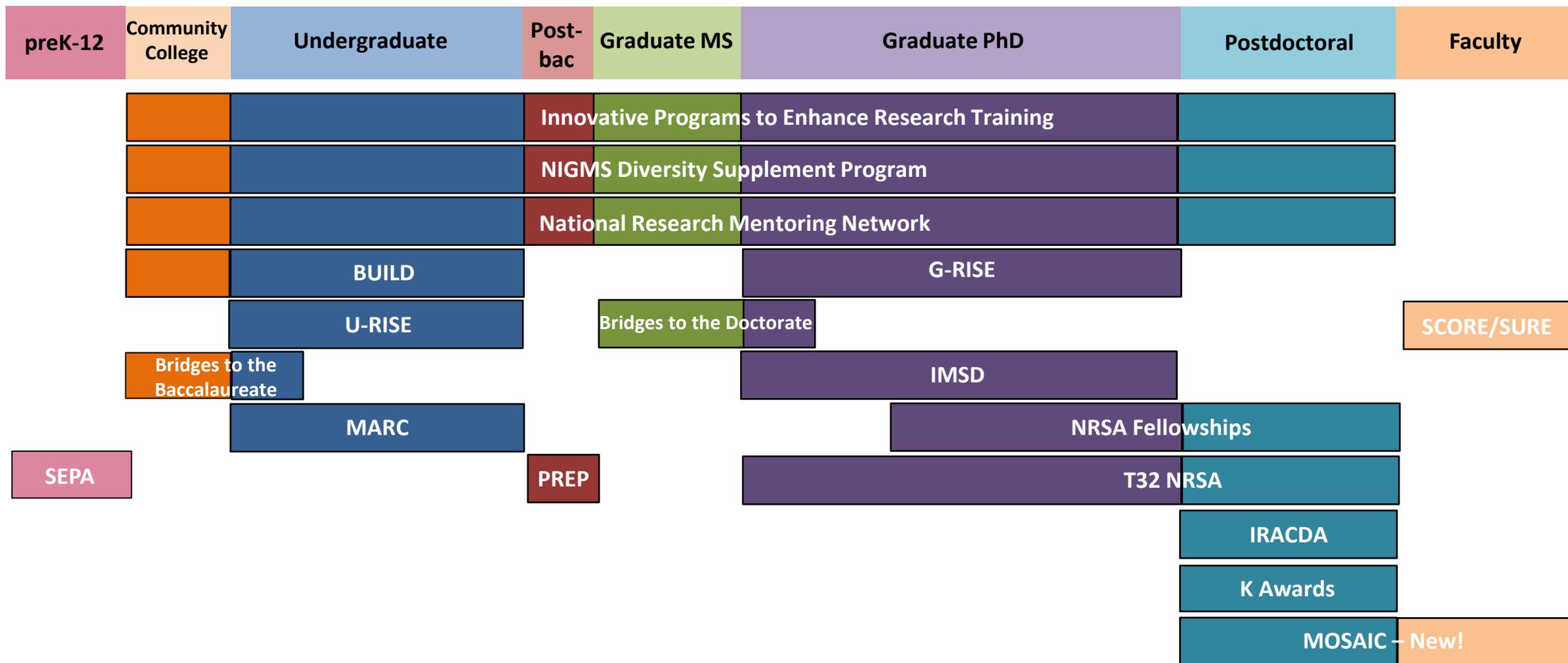
Techniques such as inclusive teaching can inspire “hyperpersistence”

By Scott Freeman on September 29, 2020

SHARE



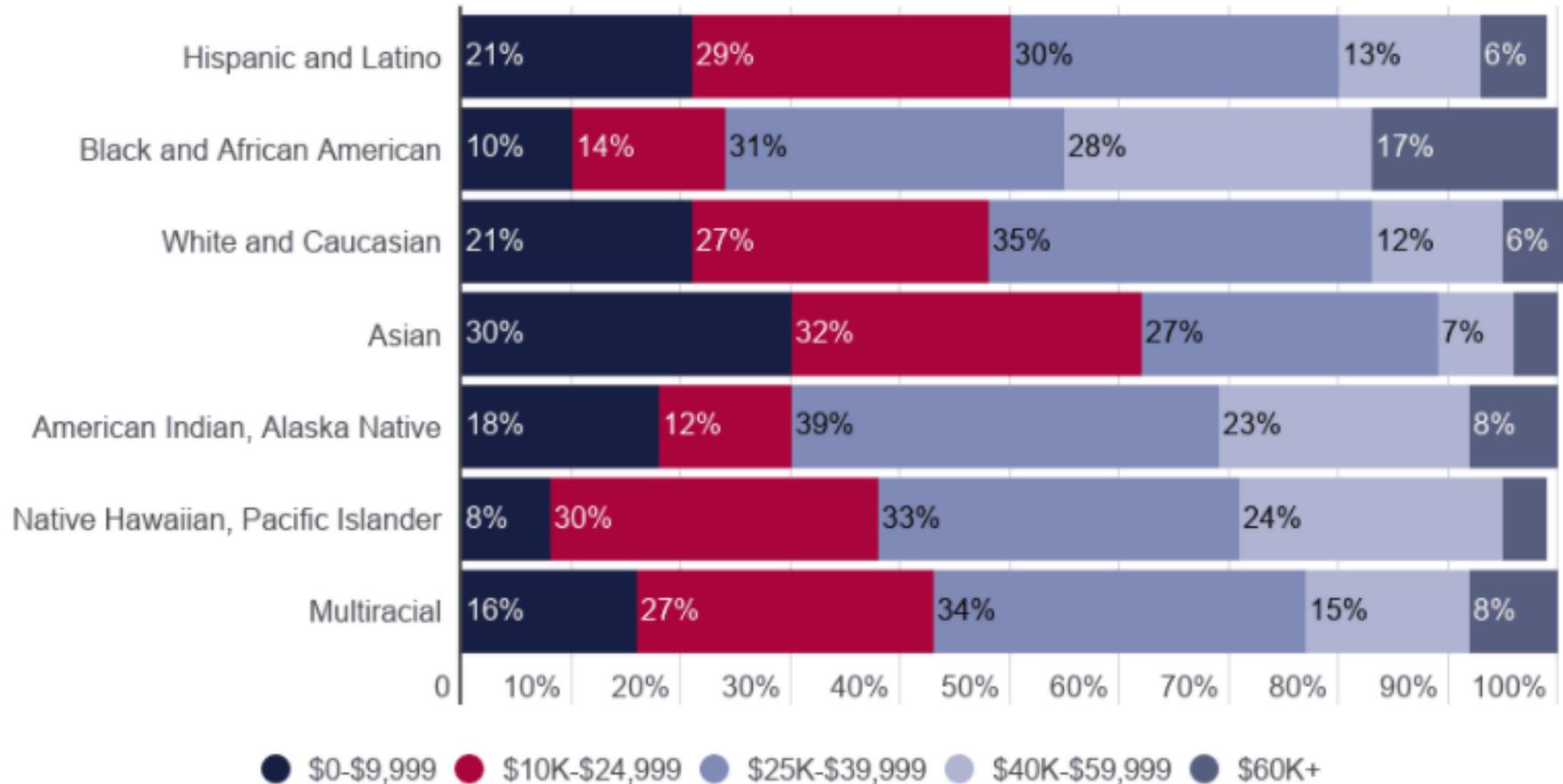
NIGMS Training, Workforce Development, and Diversity Programs



- All NIGMS FOAs encourage the use of evidence-informed methods
- NIGMS provides authentic research experiences early across a range of institution types
- Undergraduate Diversity Programs may apply for supplements to develop evidence-informed courses

Financial burden and student debt – differs across racial/ethnic groups

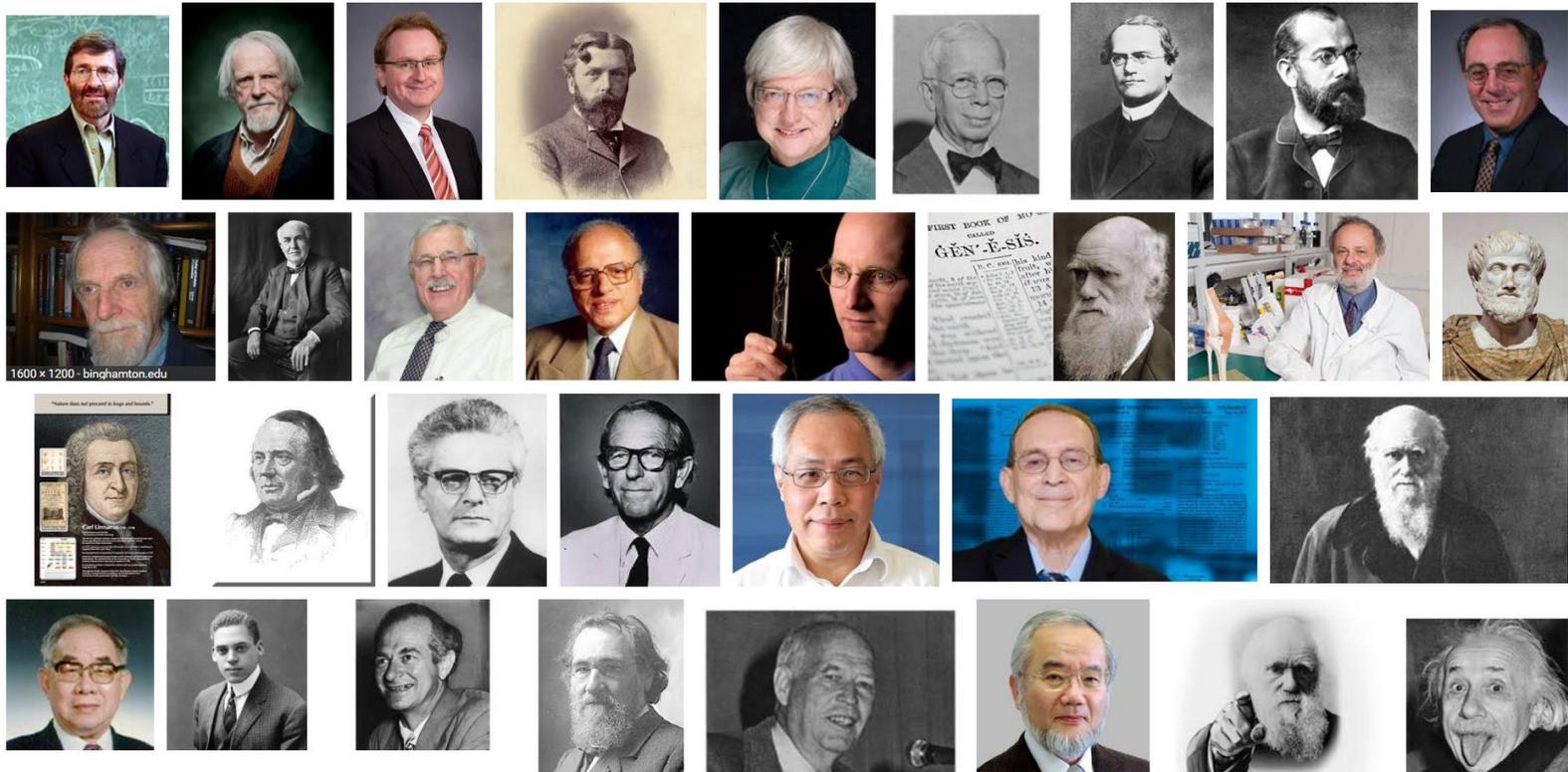
Average Student Loan Debt One Year After Graduation by Race



Figures have been rounded and may not add up to 100%

- NIGMS provides stipends and tuition remission through a broad range of programs
- *NIGMS is developing a diversity enhancing Loan Repayment NOSI*

Insufficient role models



Google Image search: "Scientist" clicked on biology – Feb 5, 2017

In 2017, NIGMS made diversity at all levels, including the faculty level, part of the scored review criteria

Study Sections are taking this seriously.



Preceptors/Mentors (Participating Faculty)

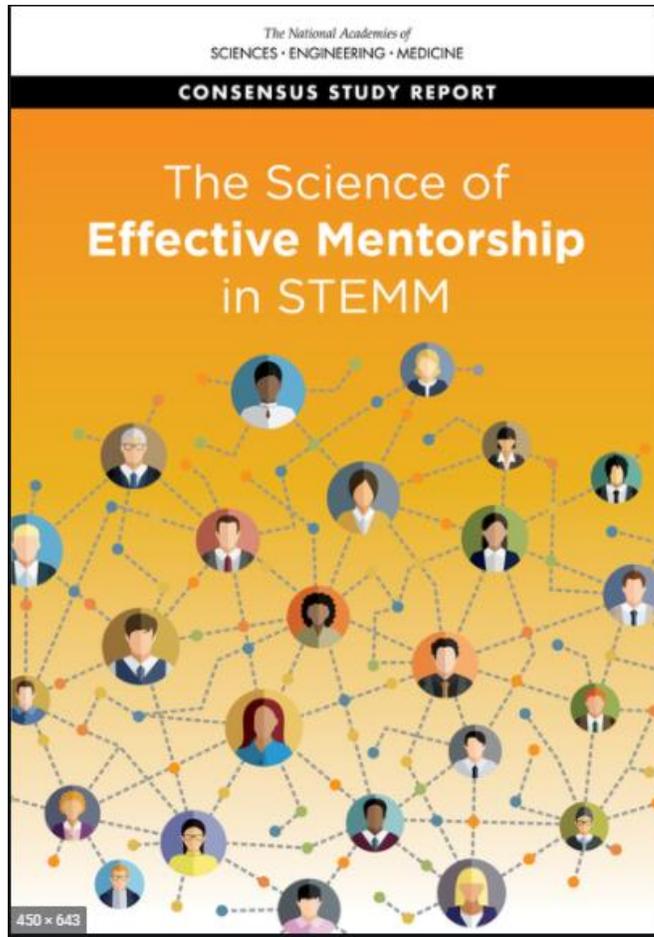
When building a training team, programs should include faculty who are committed to training, mentoring, and providing inclusive, safe and supportive research environments. Programs are encouraged to build a diverse team of preceptors/mentors that includes, for example, faculty from underrepresented groups (see [Notice of NIH's Interest in Diversity](#)) and at different career stages (i.e., early-career as well as established faculty).

Preceptors/Mentors (Participating faculty)

Describe how the program has or will assemble a diverse team of participating faculty (e.g., individuals from underrepresented backgrounds ([see Notice of NIH's Interest in Diversity](#)) and at different career stages) to provide potential role models within the training program and to enhance the excellence of the training environment.

The advancement structure within academic biomedical research environments

- Research groups with a single principal investigator, whose endorsement is essential for the advancement of a large number of individuals can contribute to unhealthy competition and power dynamics.
- Mentoring and accessing prestigious opportunities (e.g., presenting at national meetings, authorships, introduction to leaders in the field) occur informally with little oversight to ensure equity



The ad hoc nature of mentoring

“Mentorship has rarely received the focused attention, evaluation, and recognition of other professional responsibilities associated with academic STEMM, such as teaching or research.”

NIGMS training grants

- Require sustained oversight of trainees
- Require mentor training
- Require a plan for removing faculty displaying unacceptable mentorship qualities from the training program
- Request information on measures of success for trainees from well-represented and underrepresented groups
- Require faculty to include a statement of commitment to training, mentoring, and promoting inclusive, safe and supportive research environments.

All of the above listed areas are score driving for the training grant applications.



- Fund the National Research Mentoring Network and the science of mentoring, networking, and navigating critical transition points.
- NIGMS released a supplement opportunity to training programs to enhance mentoring

Biases in Hiring

March 27, 2019 3:11 PM

Tackling Unconscious Bias in the Recruitment Process

- Postdoctoral hiring has no oversight – depends on networking
- Targeted hiring notices discourage applicants from underrepresented groups
- Hiring focuses on the “pedigree” - institution prestige, training lab status, and prominent papers in elite journals
- Unconscious bias



Have you ever eliminated a candidate based on tardiness or for wearing the wrong clothes? Have you bumped a candidate up the list because they went to a reputable school? While we like to think we're objective, the truth is that we recruiters are only human and as such we're subject to the same unconscious biases as every other person on the planet.

NIGMS Innovative Programs to Enhance Research Training (IPERT – R25)

Skills, mentoring, outreach – broad national reach, innovation, and sustainability



Wisconsin Center for Education Research
SCHOOL OF EDUCATION | UNIVERSITY OF WISCONSIN-MADISON



Directory | MyWCER

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Breaking the Bias Cycle for Future Scientists: A Workshop to Learn, Experience and Change

Breaking the Bias Cycle for Future Scientists: A Workshop to Learn, Experience and Change

This overarching goal is to train the mentors of students about the concepts of implicit or unconscious bias, the effects of these biases on underrepresented minority students in training, and the strategies and means to mitigate bias within labs, departments, and institutions.

Resource Allocation

Research Letter

September 15, 2015

Sex Differences in Institutional Support for Junior Biomedical Researchers

Robert Sege, MD, PhD¹; Linley Nykiel-Bub, BA¹; Sabrina Selk, ScD²

» [Author Affiliations](#) | [Article Information](#)

JAMA. 2015;314(11):1175-1177. doi:10.1001/jama.2015.8517

Start up packages, laboratory and office space, salaries

MOSAIC Program - The scholars will have a cohort and additional oversight and mentoring when negotiating salary and start up packages.

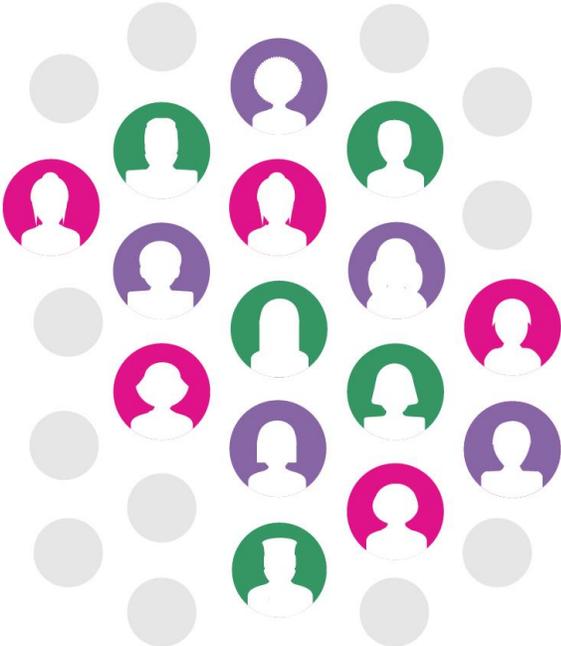
Maximizing Opportunities for Scientific and Academic Independent Careers (MOSAIC)

Postdoctoral Career Transition Award to Promote Diversity (K99/R00) – [PAR-19-343](#)
Institutionally Focused Research Education Cooperative Agreement to Promote Diversity (UE5) – [PAR-19-342](#)

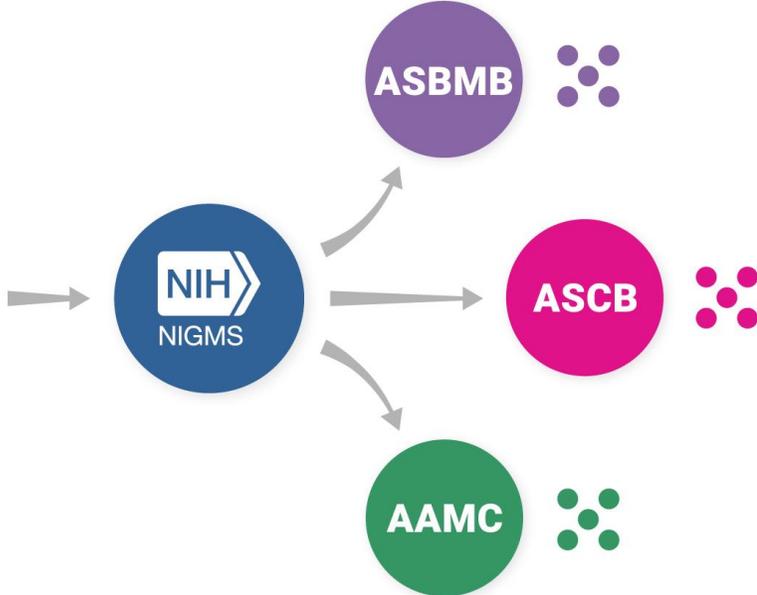
Awards to scientific societies (UE5) and time to stand up the program



MOSAIC K99/R00 Applicants Compete



MOSAIC K99/R00 Scholars Participate in Cohorts Organized by UE5



Tenure and Promotion

Publish *and* Perish? An Assessment of Gender Gaps in Promotion to Tenure in Academia

Katherine Weisshaar ✉

Social Forces, Volume 96, Issue 2, December 2017, Pages 529–560,

<https://doi.org/10.1093/sf/sox052>

Published: 28 June 2017 **Article history** ▼

Academic Bullying: A Barrier to Tenure and Promotion for African-American Faculty

Kimberly N. Frazier
Clemson University

*Florida Journal of Educational
Administration & Policy*

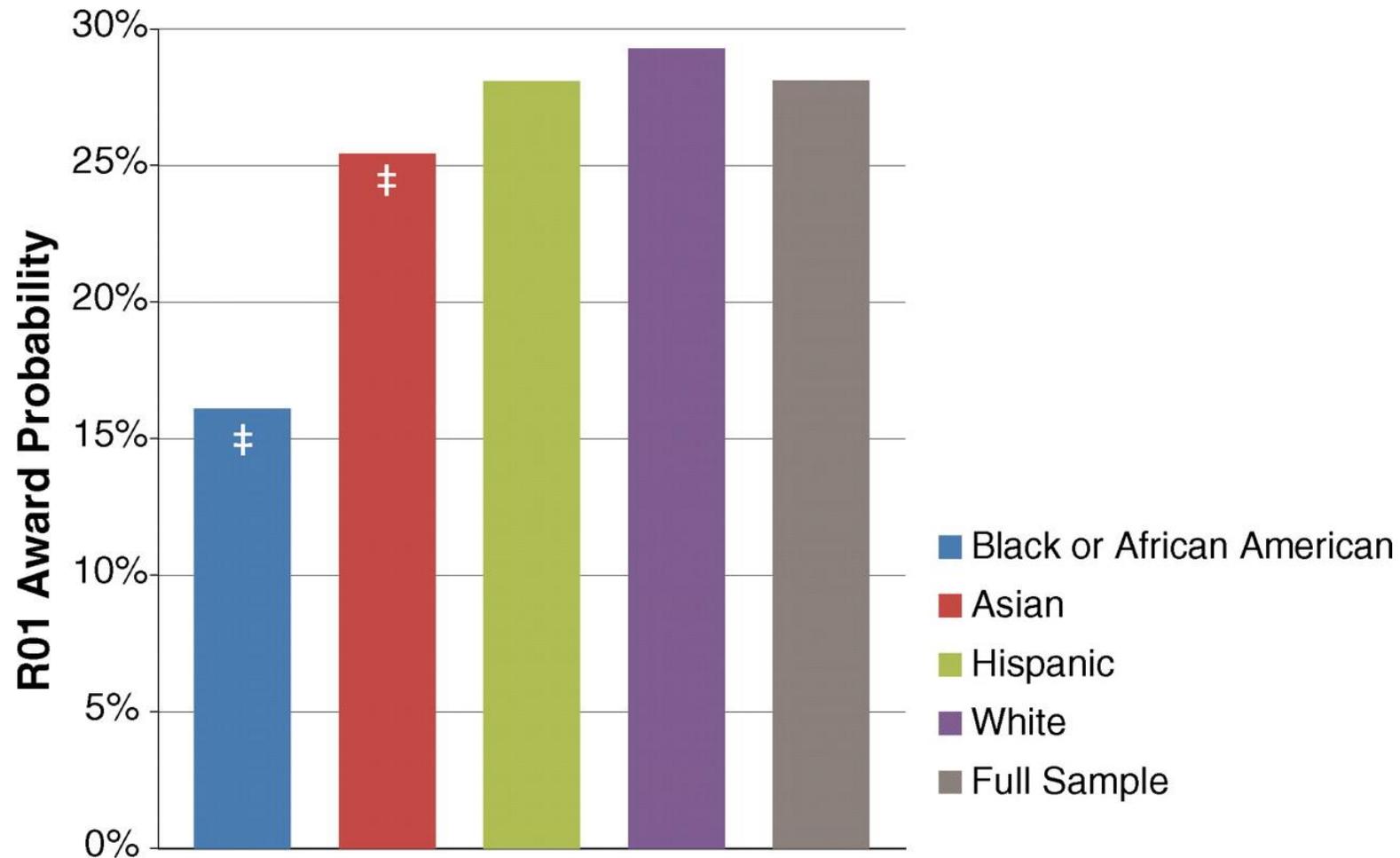
Fall 2011
Volume 5, Issue 1

The Inequities of the Tenure-Track System

As faculty are expected to publish more, nonwhite faculty suffer the consequences, argues Zawadi Rucks-Ahidiana.

By **Zawadi Rucks-Ahidiana** // June 7, 2019

Applications from African American / Black scientists are statistically less likely to receive an NIH R01 award



2011 Ginther *et al.* Science 333:1015 Funding Disparities 2020



NIH launched the Diversity Program Consortium ~\$500 M over 10 years

- Three levels of simultaneous impact: **student, faculty** and **institution**
- Integration of **social science research** and **psychosocial interventions** into the process of training and mentoring students and faculty
- Rigorous **assessment and evaluation** of the training and mentoring interventions implemented across the program
 - Hallmarks of Success
 - Common Measures

NIGMS Partnering with the Office of Scientific Workforce Diversity to implement Implicit Bias training

What is bias?

Bias consists of attitudes, behaviors, and actions that are prejudiced in favor of or against one person or group compared to another.

What is implicit bias?

Implicit bias is a form of bias that occurs automatically and unintentionally, that nevertheless affects judgments, decisions, and behaviors. Research has shown implicit bias can pose a barrier to recruiting and retaining a diverse scientific workforce.

Research Shows

The good news is that implicit bias can be mitigated with awareness and effective bias-reduction strategies. We provide a few examples of these strategies that you can use to reduce implicit bias.

Think of counter-stereotypic examples: Identify scientists of diverse backgrounds in your field (Blair et al).

Perspective-taking: Imagine what it is like to be a person who experiences people questioning your ability or skills because of your social identity (Galinsky & Moskowitz).

Interrupt automatic biased thoughts: Identify when you may be most influenced by implicit bias (e.g., evaluating performance) and create an action plan (e.g., review evaluation criteria before assessing each person's performance in the form of IF and THEN statements) to increase mindfulness of, or mitigate the influence of, implicit bias (Stewart & Payne).

Education: Join or set up an implicit-bias workshop in your community to raise awareness (Carnes et al., Girod et al.).



"The Science of Diversity and the Impact of Implicit Bias" (PDF, 3.3MB)

- ✓ Reviewers
- ✓ Scientific Review Officers
- ✓ Program Officials

NIGMS Partnering with the Center for Scientific Review to Enhance the Diversity of the Reviewer Pool



Center for
Scientific Review

Publication Inequities

Differences in STEM doctoral publication by ethnicity, gender and academic field at a large public research university

Rodolfo Mendoza-Denton , Colette Patt, Aaron Fisher, Andrew Eppig, Ira Young, Andrew Smith, Mark A. Richards

Published: April 5, 2017 • <https://doi.org/10.1371/journal.pone.0174296>

RESEARCH ARTICLE | SCIENTIFIC COMMUNITY

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

 Travis A. Hoppe^{1,2}, Aviva Litovitz^{1,2}, Kristine A. Willis^{3,*},  Rebecca A. Meseroll^{1,2}, Matthew J. Perkins^{1,2},  B. Ian Hut...

Science Advances 09 Oct 2019:
Vol. 5, no. 10, eaaw7238
DOI: 10.1126/sciadv.aaw7238

Publications as predictors of racial and ethnic differences in NIH research awards

Donna K. Ginther  , Jodi Basner , Unni Jensen , Joshua Schnell , Raynard Kington , Walter T. Schaffer 

Published: November 14, 2018 • <https://doi.org/10.1371/journal.pone.0205929>

Structure and belonging: Pathways to success for underrepresented minority and women PhD students in STEM fields

Aaron J. Fisher , Rodolfo Mendoza-Denton, Colette Patt, Ira Young, Andrew Eppig, Robin L. Garrell, Douglas C. Rees,  Tenea W. Nelson, Mark A. Richards

Published: January 9, 2019 • <https://doi.org/10.1371/journal.pone.0209279>

Addressing the Minority Tax: Perspectives From Two Diversity Leaders on Building Minority Faculty Success in Academic Medicine

Campbell, Kendall M. MD; Rodríguez, José E. MD [Author Information](#) 

Academic Medicine: December 2019 - Volume 94 - Issue 12 - p 1854-1857

doi: 10.1097/ACM.0000000000002839

Addressing disparities in academic medicine: what of the minority tax?

[José E Rodríguez](#) , [Kendall M Campbell](#) & [Linda H Pololi](#)

[BMC Medical Education](#) **15**, Article number: 6 (2015) | [Cite this article](#)

8558 Accesses | **105** Citations | **358** Altmetric | [Metrics](#)

Published on December 12, 2017 — 0 Comments

The Minority Tax: An Unseen Plight of Diversity in Medical Education

by Tyrone Johnson at University of Chicago Pritzker School of Medicine

CAREER FEATURE · 24 JUNE 2020

The time tax put on scientists of colour

The pressure on researchers from ethnic minority groups to participate in campus diversity issues comes at a cost.

World View | Published: 22 September 2020

When the minority tax is doubled: being Black and female in academic medicine

Sophie Balzora 

[Nature Reviews Gastroenterology & Hepatology](#) **18**, 1(2021) | [Cite this article](#)

367 Accesses | **1** Citations | **80** Altmetric | [Metrics](#)

MOSAIC

CONSENSUS STUDY REPORT

Sexual Harassment of Women

Climate, Culture, and
Consequences in
Academic Sciences, Engineering,
and Medicine



SEXUAL COERCION

promising professional
rewards in return for
sexual favors

threatening professional
consequences unless sexual
demands are met

UNWANTED SEXUAL ATTENTION

rape

sexual assault

unwanted groping or stroking

PUBLIC CONSCIOUSNESS

GENDER HARASSMENT

relentless pressure
for sex

unwanted sexual
discussions

nude images posted
at work

relentless pressure
for dates

sexually humiliating acts

offensive sexual teasing

sexual insults
e.g. "for a good time call...",
calling someone a whore

sexist insults
e.g. women don't belong
in science

offensive remarks
about bodies

obscene gestures

sabotage of women's
equipment

vulgar name calling
e.g. "slut," "bitch," "c**t"

gender slurs
e.g. "pu*y"

insults to working mothers
e.g. "you can't do this job with
small kids at home"

- NIGMS incorporated language in all training FOAs requiring a description of the policies and practices to address harassment and discrimination.
- NIH incorporated similar language for all NIH training programs

Anti-Sexual Harassment: for NIH Awardee Organizations and Those Who Work There

Learn about NIH's commitment to supporting a safe and respectful work environment, who to contact with questions or concerns, and what NIH's expectations are for institutions and the individuals supported on NIH-funded awards.

NIH's Commitment

NIH is committed to doing our part to support a safe and respectful work environment across the entire biomedical research enterprise. NIH does not tolerate harassment of any kind, including [sexual harassment](#), at research institutions that receive NIH funding, or anywhere NIH-funded activities are conducted.

"[...] We are determined to be part of the solution [...] We can and will take action if there are concerns that sexual harassment is affecting NIH-funded research." – excerpt from NIH Director's statement. [Read full statement.](#)

Find Help

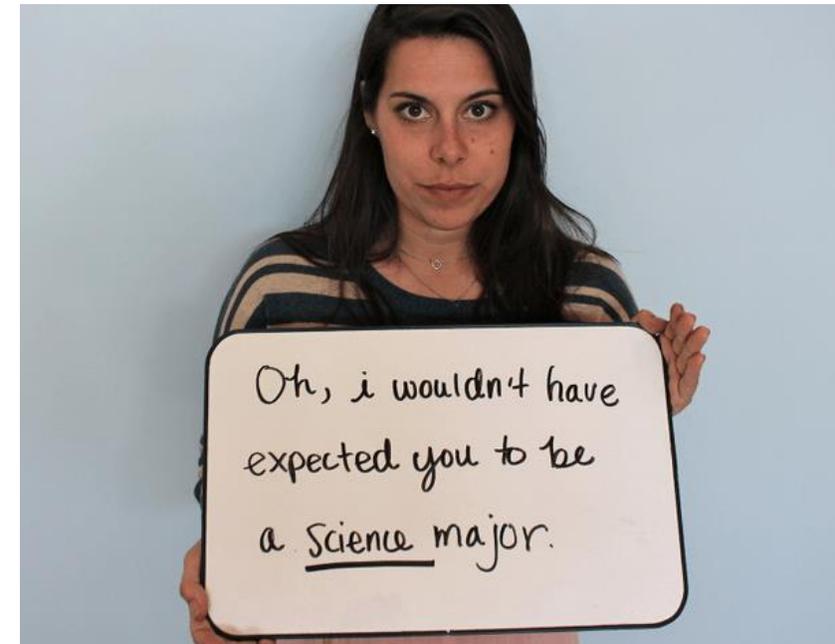
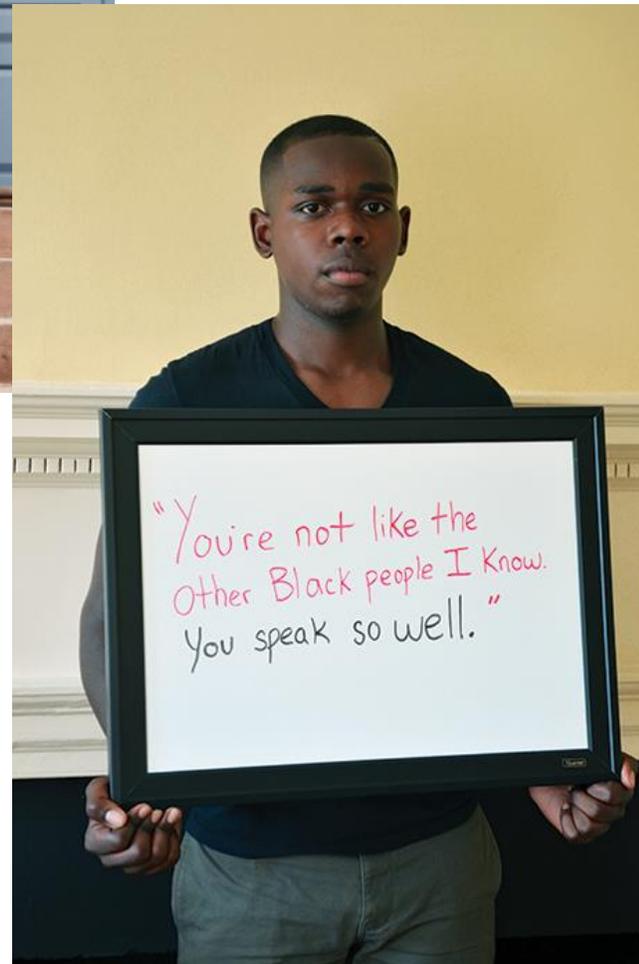


New "All About Grants" Podcast on NIH's Anti-Sexual Harassment Policies for Awardees
[#AllAboutGrants](#) podcast. What you should know about NIH's anti-sexual harassment policies and how to notify NIH with a concern:
<https://go.usa.gov/xVanJ>

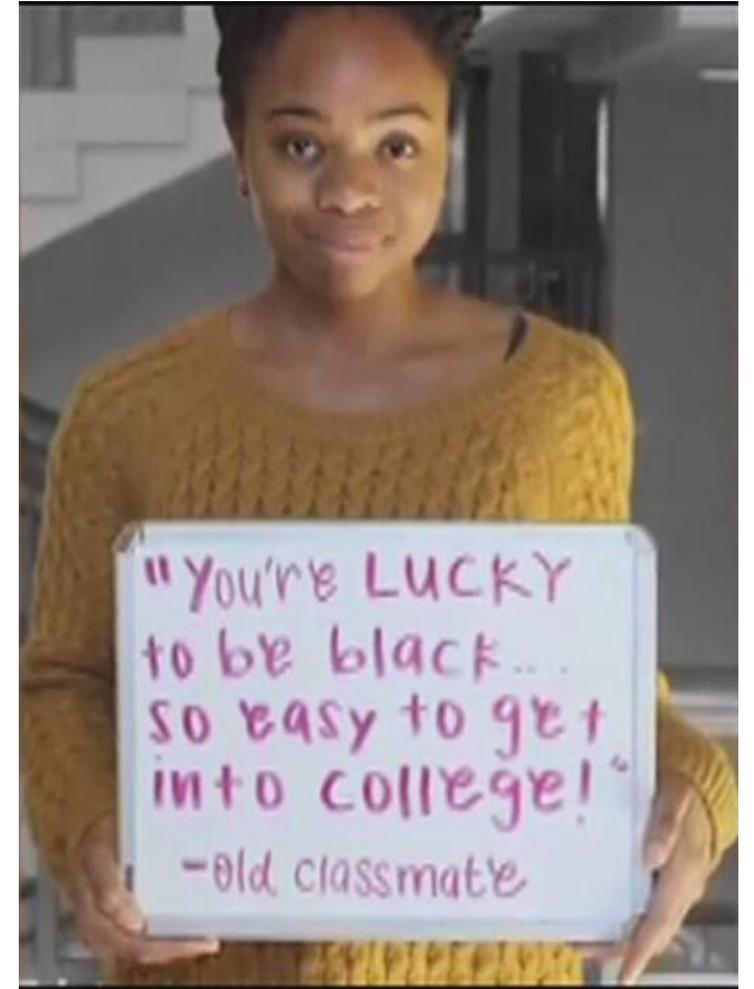
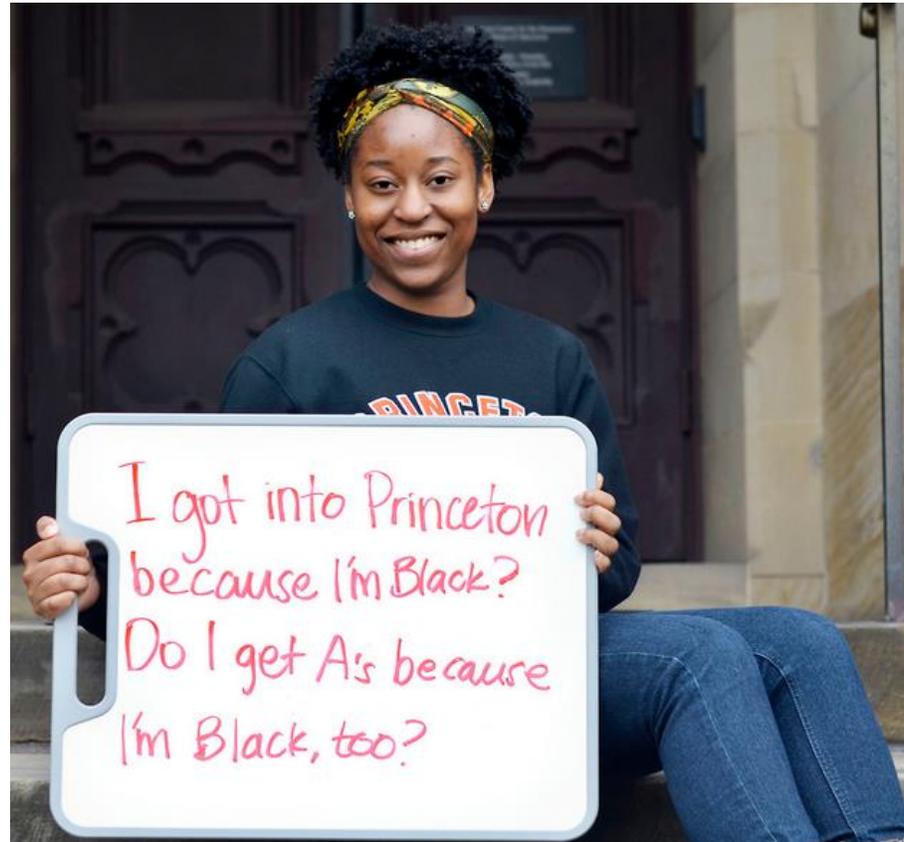
Dr. Jodi Black, Deputy Director of the NIH Office of Extramural Research



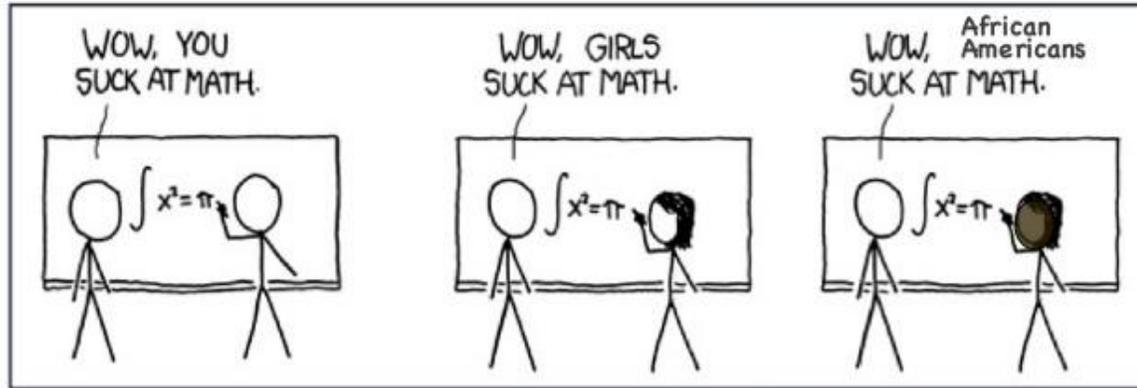
Microassaults, Microinsults, and Microinvalidations



Status Leveling



Tokenism



Xkcd.org with modification by Cohoon, 2012

Isolation



Stereotype Threat



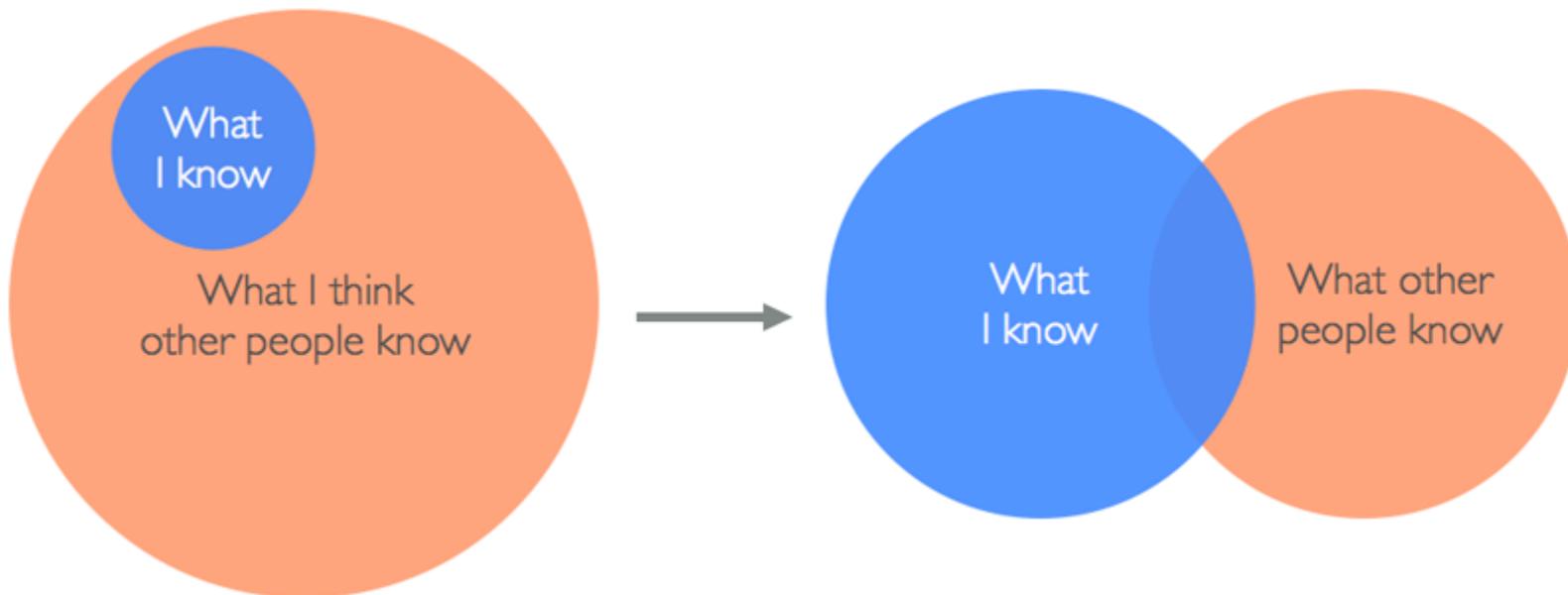
whistling vivaldi

how stereotypes affect us
and what we can do

CLAUDE M. STEELE

"This is an intellectual odyssey of the first order—a true tour de force."
—WILLIAM C. BOWEN

Imposter Phenomenon



Research on Interventions to Enhance Persistence in Biomedical Research

Increase the evidence base for effective, high-impact, scalable interventions, and to improve our understanding of the factors contributing to the advancement of individuals pursuing biomedical research careers.

MARCH 18, 2021

Funding Opportunities: Addressing Structural Racism and Discrimination

BY DR. ALISON GAMMIE AND DR. KENNETH GIBBS

0 comments

We want to make you aware of two funding opportunities to investigate and address structural racism and discrimination in the biomedical research enterprise. This is a follow-up to our [previous post](#) about NIGMS' support for [UNITE](#), the trans-NIH initiative to address structural racism and promote diversity, equity, and inclusion in biomedical research.



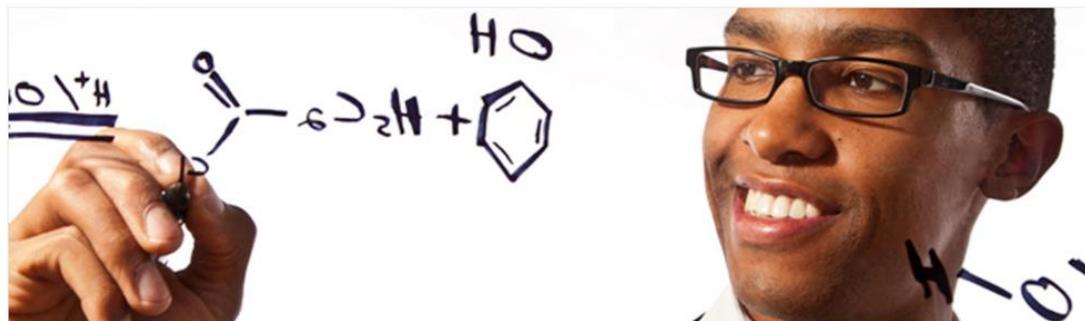
Contact:
Sydella Blatch

PAR-19-295

Interventions that increase persistence

- Forming supportive cohorts and learning communities
- Mentoring with cultural awareness
- Reducing stereotype threat
- Diminishing imposter phenomenon
- Overcoming microaggressions
- Mitigating unconscious bias
- Increasing cultural awareness and sensitivity
- Emphasizing cultural assets
- Affirming kindness
- Engaging family and support systems

- Research on Interventions
- IPERT
- Diversity Enhancing Training Programs
- BUILD
- NRMN





Educator-Initiated Innovations

- **Training Modules PAR-20-296 (R25) for Creating Safe, Inclusive, and Supportive Research Environments (NOT-GM-20-047)**
 - Applications due: June 18, 2021
- **Administrative supplements to NIGMS training grants - topics**
 - Rigor & Reproducibility
 - Career Development
 - Skills Development – technical, operational, professional
 - ***Safe and Inclusive Research Environments***
 - Laboratory, Chemical, and Physical Safety in the Research Environment
 - Undergraduate Curriculum Development
 - Evaluation
 - ***Mentoring***
 - ***Wellness and Resiliency***

Coming soon – structural racism and discrimination

NIGMS supported diversity-focused meetings



Fostering Diversity in Biostatistics
March 22, 2020

10:30 am - 6:30 pm
JW Marriott Nashville
201 8th Avenue South
Nashville, TN 37203



The Leadership Alliance

National Symposium Online Registration



UNDERSTANDING INTERVENTIONS

Visualizing a Better Future in STEM



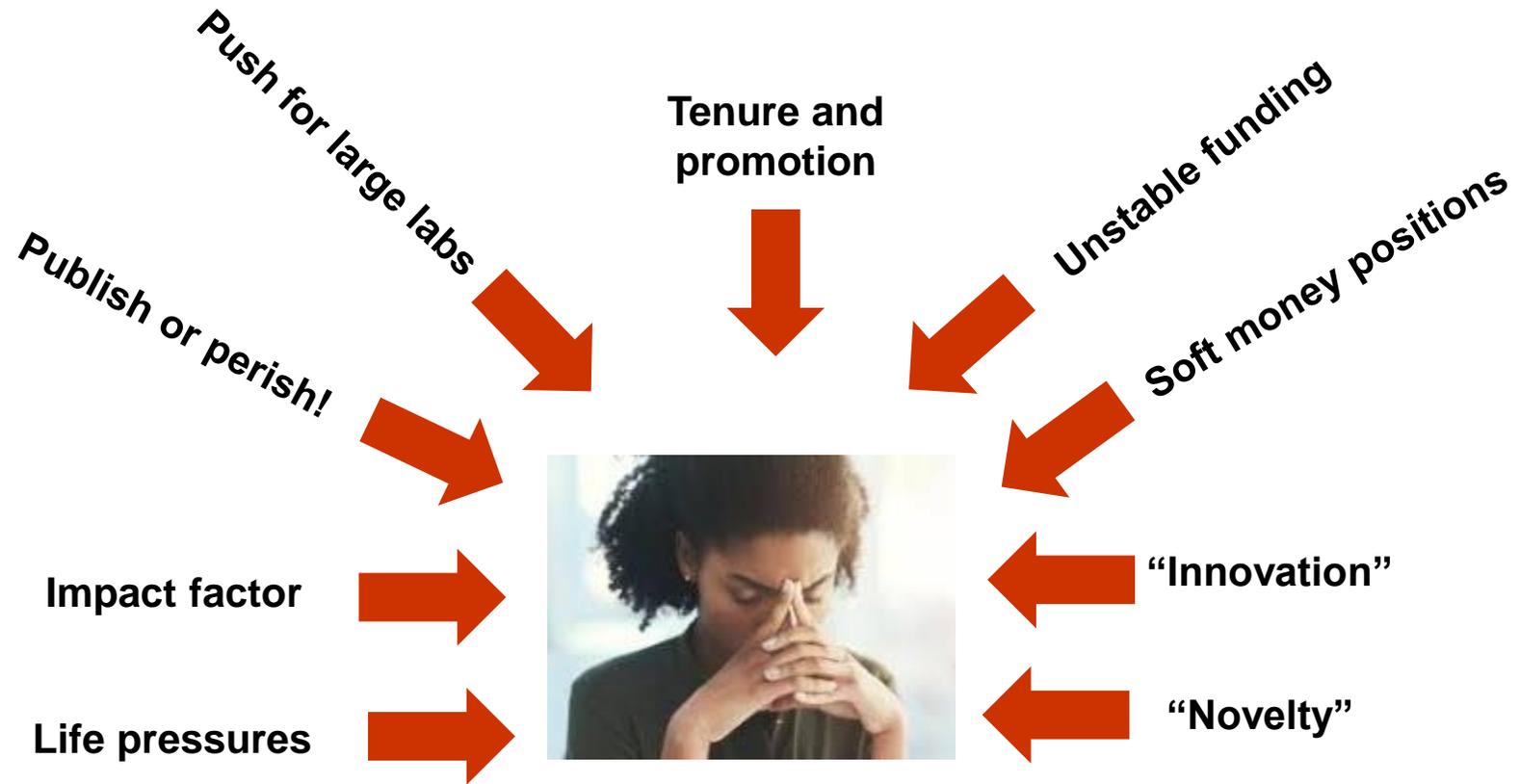
ABRCMS 2020
THE VIRTUAL EXPERIENCE
November 9-13, 2020



2019 SACNAS
National Diversity in STEM Conference

Honolulu, Hawai'i Oct. 31 - Nov. 2

The Biomedical Research Incentive Structure



Graduate School Can Have Terrible Effects on People's Mental Health

Ph.D. candidates suffer from anxiety, depression, and suicidal ideation at astonishingly high rates.

ALIA WONG NOVEMBER 27, 2018



The Emotional Toll of Graduate School

Mental health disorders and depression are far more likely for grad students than they are for the average American

By Prateek Puri on January 31, 2019



Credit: Getty Images

WELLNESS RESOURCES FROM THE OITE

Read the [new Blog Post](#) from Dr. Sharon Milgram, Director of the OITE, on maintaining/improving your mental health and well-being as we enter the fall and winter months.

[Wellness Support Groups](#) **New!**

Wellness Support Groups are 8-week standing groups facilitated by OITE wellness advisors. They are meant to offer a supportive space for trainees who have similar needs, experiences, and/or identities. The groups beginning on February 22nd will address imposter fears, perfectionism, and straddling cultures.

CHECK OUT THE NEW SEMINAR SERIES: [THE MENTAL HEALTH AND WELL-BEING OF BIOMEDICAL RESEARCHERS](#)

It begins November 2, 2020, with a session on *Mental Health and Wellness through a Cultural Lens* and continues with monthly seminars thereafter.

[THE NIH BECOMING A RESILIENT SCIENTIST SERIES](#) BEGINS SEPTEMBER 15, 2020 AND CONTINUES MONTHLY THROUGH FEBRUARY.

This series is designed for trainees at all career stages.

[NEW WELLNESS SKILL-BUILDING GROUPS](#), LAUNCHING NOVEMBER 9 AND JANUARY 4 **New!**

These skills-based groups will focus on four topics: stress management, mindfulness, emotional regulation, and assertiveness. Each series will last 4-6 weeks.

Wellness Support Groups **New!**

Imposter Fears, Perfectionism, and Straddling Cultures

"Master Stress" Images **New!**

- ["Master Stress" Screen Saver](#)
- ["Master Stress" PDF](#)

Wellness Resources from the OITE: Winter 2020

Slides: Supporting Trainees through the COVID Winter

New OITE Seminar Series: The Mental Health and Well-being of Biomedical Researchers

NIH Becoming a Resilient Scientist Series

Resilience Group Descriptions

- OITE providing resources and training on wellness
- NIGMS partnering with OITE to provide "train the trainer" series on becoming a resilient scientist.
- NIGMS offers supplements to training programs to develop modules on wellness and resiliency as well as safe and inclusive research environments.
- NIGMS FOAs request through an institutional letter of support information regarding practices to promote student well-being.

Science of Science Policy Approach to Analyzing and Innovating the Biomedical Research Enterprise (SCISIPBIO) (R01)



National Institute of
General Medical Sciences

Supports research to provide scientific analyses of important aspects of the biomedical research enterprise and efforts to foster a diverse, innovative, productive, and efficient scientific workforce, from which future scientific leaders will emerge.

Contact: Kenny Gibbs

[NSF 19-547](#)
[NIH NOT-19-011](#)

MARCH 18, 2021

Funding Opportunities: Addressing
Structural Racism and Discrimination

BY DR. ALISON GAMMIE AND DR. KENNETH GIBBS

0 comments

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Major Themes in NIGMS Training Programs – *Score Driving*

- **Trainee skills development** – use evidence-informed approaches to provide technical, operational and professional skills
- **Specific Objectives** - obtainable and measurable training objectives
- **Rigor & transparency, responsible & safe conduct** of research throughout the training experience
- **Commitment to diversity & inclusion** at all levels
- **Promote a culture of safety**, including safe and inclusive research training environments
- **Mentor training and oversight** throughout the trainees' time in the program
- **Career preparedness** – provide knowledge of and skills to transition into the range of careers in the biomedical research workforce
- **Strong institutional support** for research training
- **Holistic approach to admissions**
- **Evaluation and responsiveness to data** - the collection and dissemination of data on the success/failure of educational aims

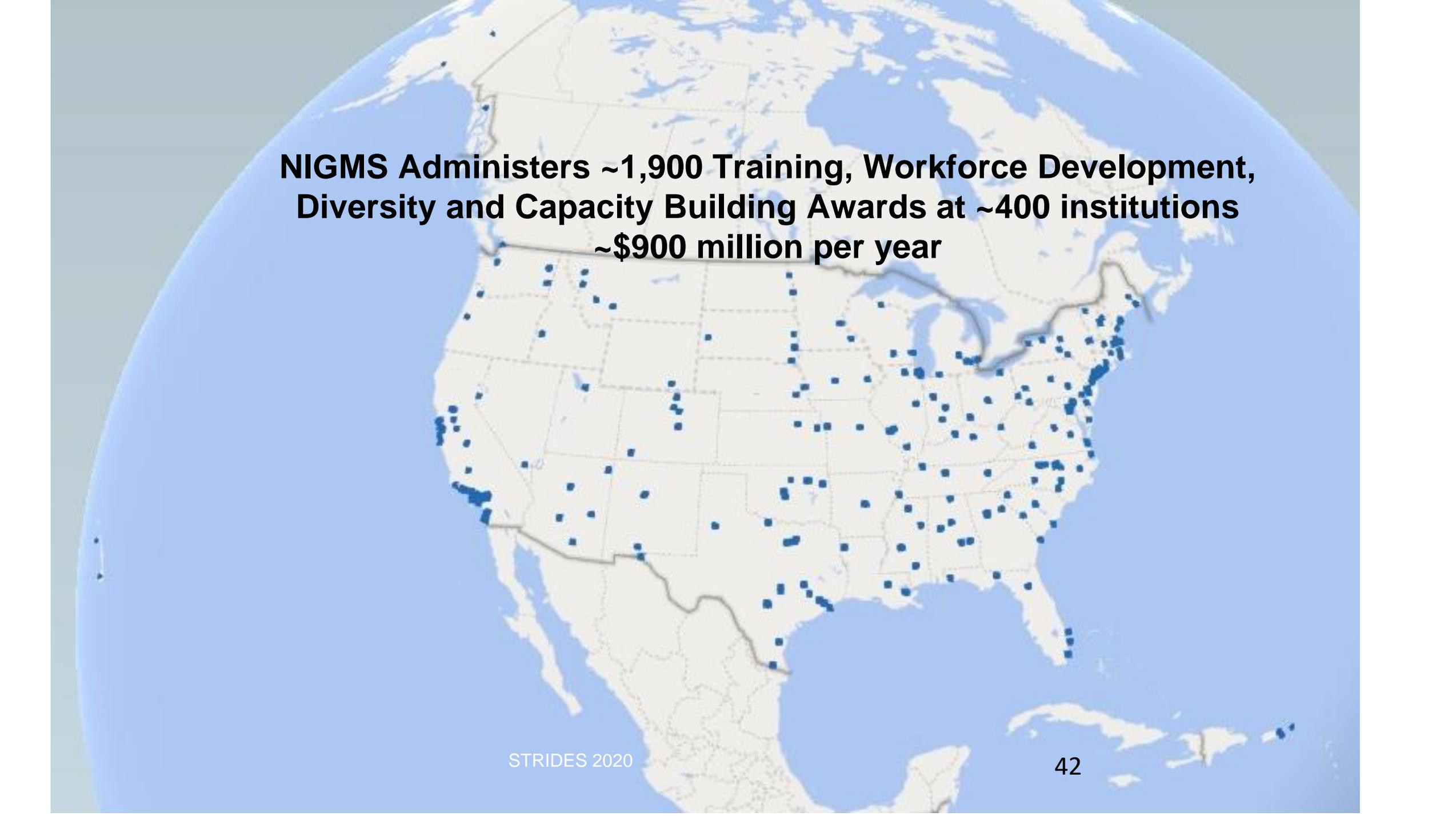


Major Themes in NIGMS Training Programs – *Score Driving*

Institutional Support Letter (10-page maximum). Signed by President, Provost, Dean – DEI areas:

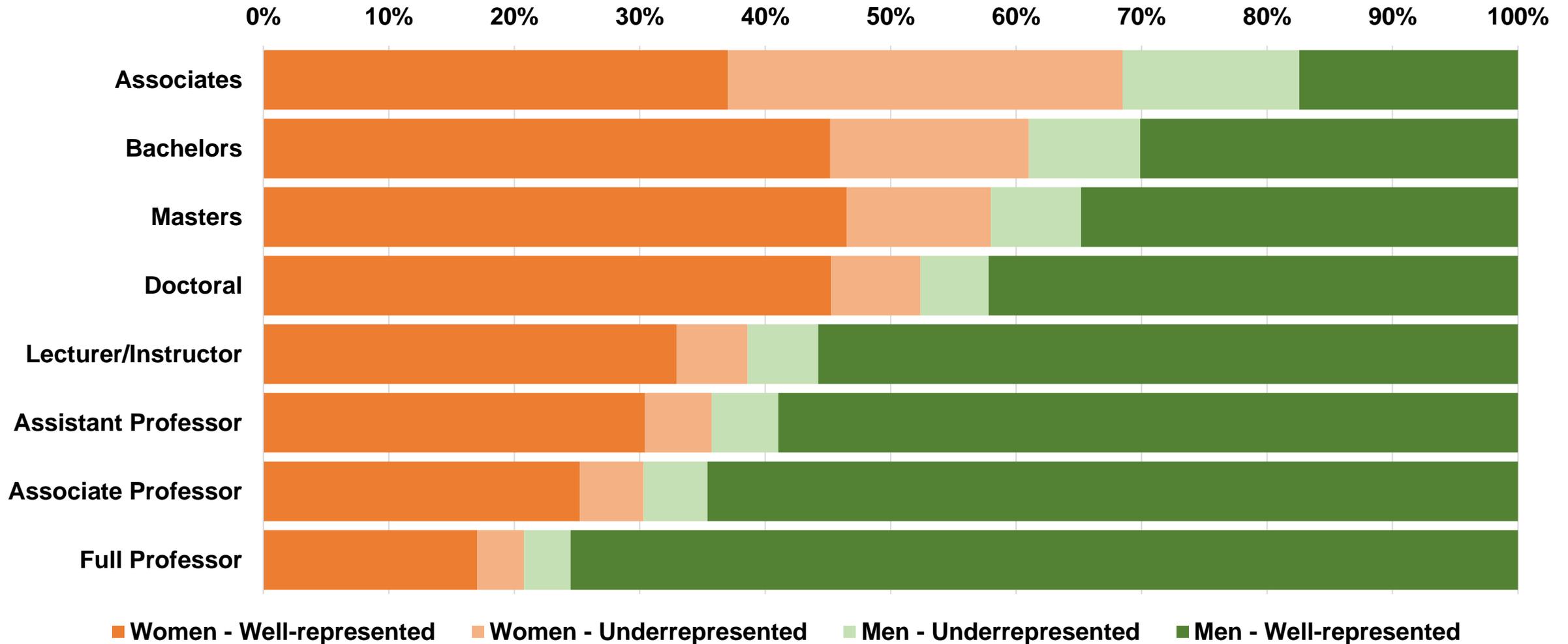
- Fostering and rewarding excellence in training (e.g., through institutional policies such as tenure and promotion);
- Supporting the remediation or removal of Participating Faculty from the program who are poorly performing mentors;
- Promoting diversity and inclusion at all levels of the research training environment (trainees, staff, faculty, and leadership);
- Ensuring a positive, supportive and inclusive research and training environment for individuals from all backgrounds;
- Ensuring that proper policies, procedures, and oversight are in place to prevent discriminatory harassment and other discriminatory practices and to appropriately respond to allegations of such discriminatory practices, including providing any required notifications to NIH (e.g., requesting a change of PD/PI status; see [NOT-OD-19-056](#));
- Providing trainees access to student support services, such as healthcare, counseling services, and housing;
- Ensuring that trainees will continue to be supported when they transition from the training grant to other sources of support

Questions? Comments?

A map of the United States with numerous blue dots scattered across the country, representing the locations of institutions receiving awards. The dots are distributed across all major regions, with a higher density in the Northeast and West Coast.

**NIGMS Administers ~1,900 Training, Workforce Development,
Diversity and Capacity Building Awards at ~400 institutions
~\$900 million per year**

Underrepresentation across the stages of the biomedical academic pathway



Underrepresented: Hispanic, African American/Black, Native American, Alaska Native, Pacific Islander
 Well represented: White, Asian