

NIH's Scientific Approach to Inclusive Excellence

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HHMI Health Research Alliance Meeting | October 16, 2018



NIH's Scientific Approach to Inclusive Excellence

Presentation Outline

- Why diversity matters
- Data tell a story
- Keys to scientific workforce diversity
- Strategies for institutional culture change: NIH approaches
- Work-life integration is a central issue



Capturing the Benefits of Diversity

Why Diversity Matters

Capitalizing on the Opportunity



Papers written
• Recei
• Publicat
factors

Thinking
Style

Language

Ethnicity*

Religion

*Underrepresented
Populations in U.S.
Biomedical, Clinical,
Behavioral and Social
Science Research

Subconscious stere
patient interactions, di
diverse twenty-f

Perspectives

Experiences

Nationality*

Geography

of
Priorities

Racial bias in
recommendat
differences b
PNAS
Kelly M. Hoffman^{1,2}, Sophie
¹Department of Psychology, Universit
VA 22908; and ²Department of Public He
Edited by Susan T. Fiske, Princeton University, Princ
March 1, 2010 (received for review

Race*

Culture

Skills

Gender*

Physical
Abilities

Sexual
Orientation

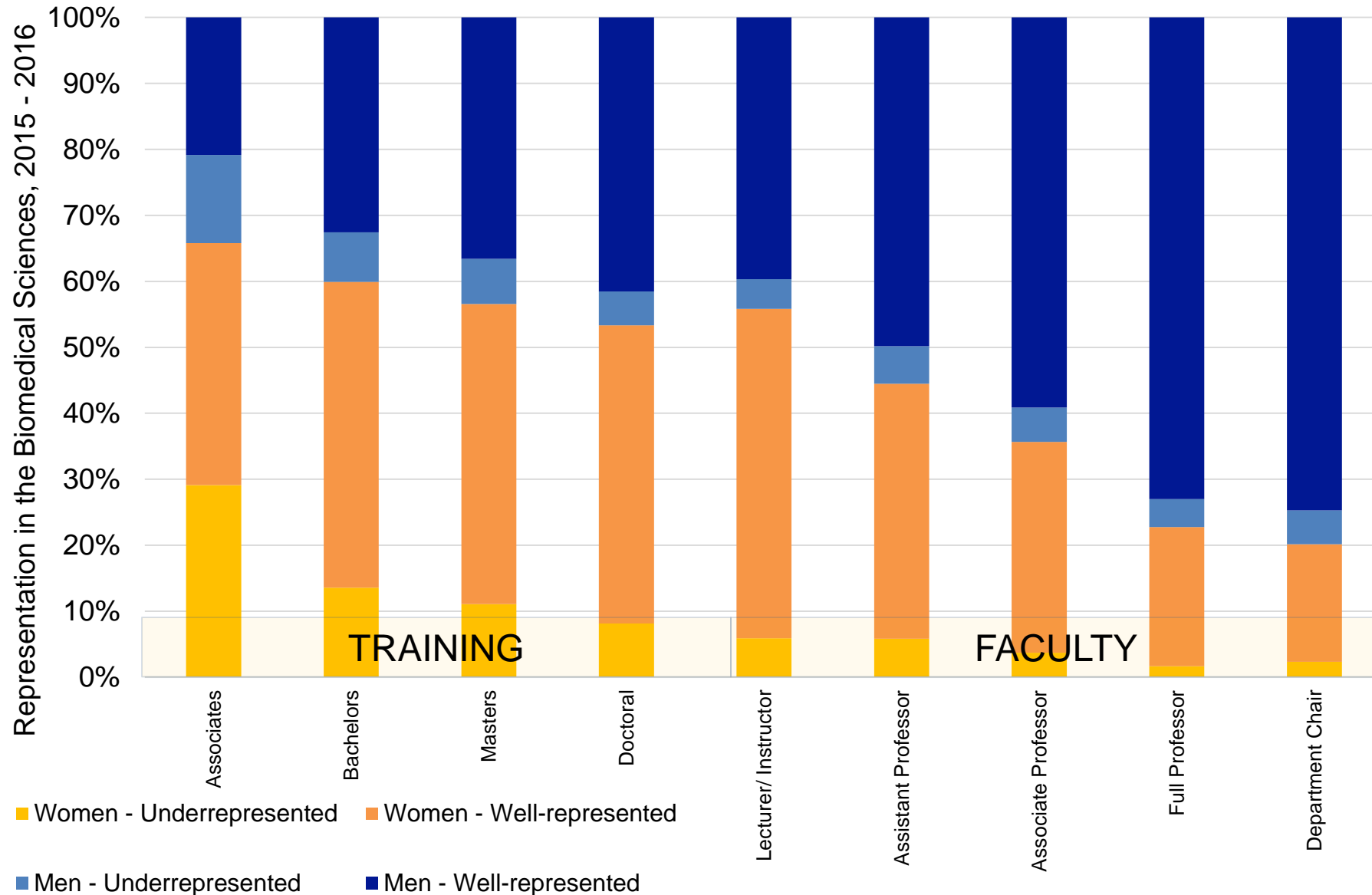
Disability*

Age

Socioeconomic
Status*



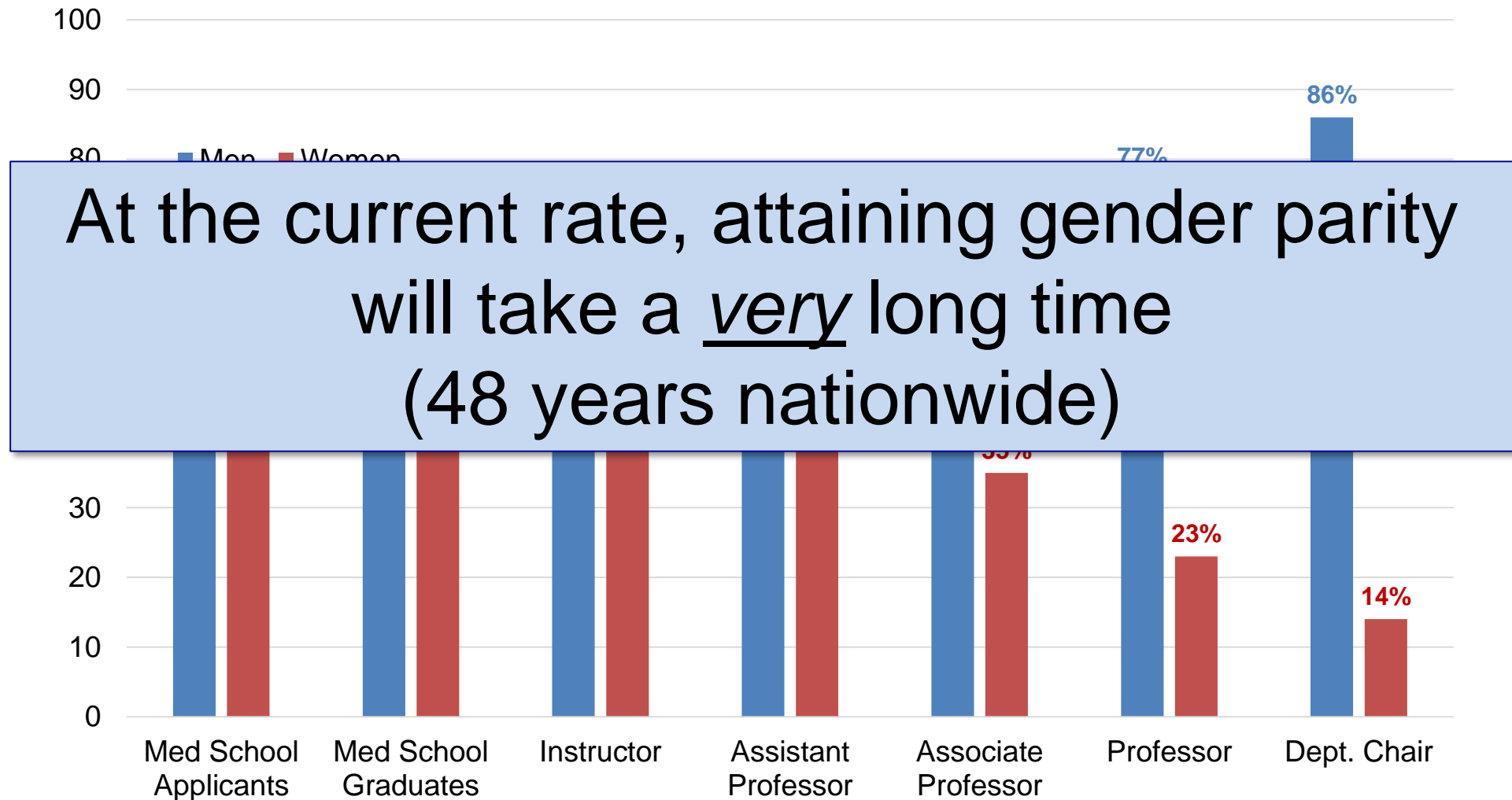
Data Tell a Story ...



https://nces.ed.gov/programs/digest/2017menu_tables.asp; <https://www.aamc.org/data/facultyroster/reports/475478/usmsf16.html>



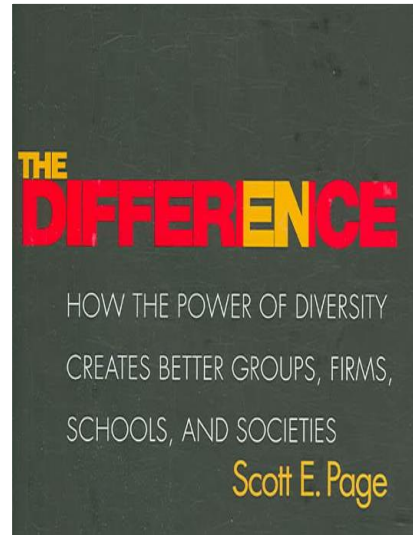
... That Needs a Better Ending



<http://www.aamcdiversityfactsandfigures2016.org/report-section/section-5/medical-schools/#tablepress-31> (Med School, 2015)
<https://www.aamc.org/download/475530/data/16table13.pdf> (Faculty, 2016)
https://www.aamc.org/download/411920/data/2014_table11.pdf (Dept Chairs, 2014)



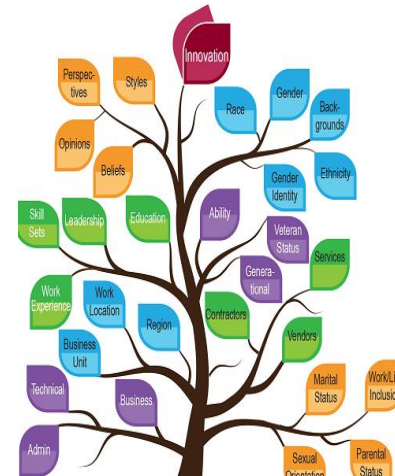
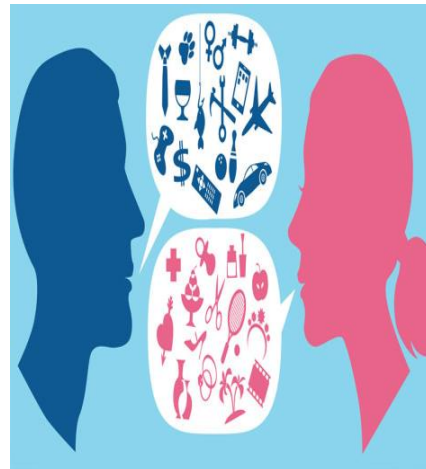
Diversity
Science



**DIVERSITY
PROGRAM
CONSORTIUM**

*Supported by the National
Institutes of Health*

Sociocultural
Factors



Sustainability



Valantine and Collins.
PNAS 2015: Oct
6;112:12240-2

Diversity
Science

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Recruitment,
Retention:
What Works
and Why?
Context matters

Sustainability:
Dissemination
Scaling
Institutional
Accountability

Understanding What Works: NIH Diversity Program Consortium

Pipeline, Mentoring, Evaluation

Awards made October 2014

BUILD: 10 sites/experiments

NRMN

CEC

Total: \$250 million (5 years)

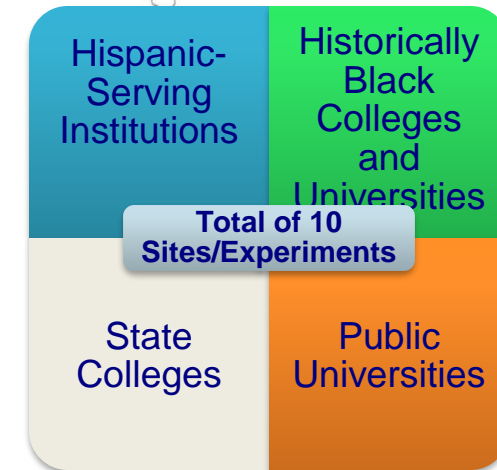


BUILD Tested Interventions

- Stereotype threat
- Critical race theory
- Student entrepreneurship
- Living and learning communities

NRMN Activities

- Guided virtual mentorships
- MyNRMN tool
- Mentors: 1,456*
- Mentees: 1929 *
- Grantwriting/coaching - mentees: 351



*Data as of June 2017

Faculty-Focused Interventions

Certain interventions increase self-efficacy and research success:

- Rigorous pilot-project funding process
- Protected time for research
- Grant-writing workshops
- Grant-writing coaches

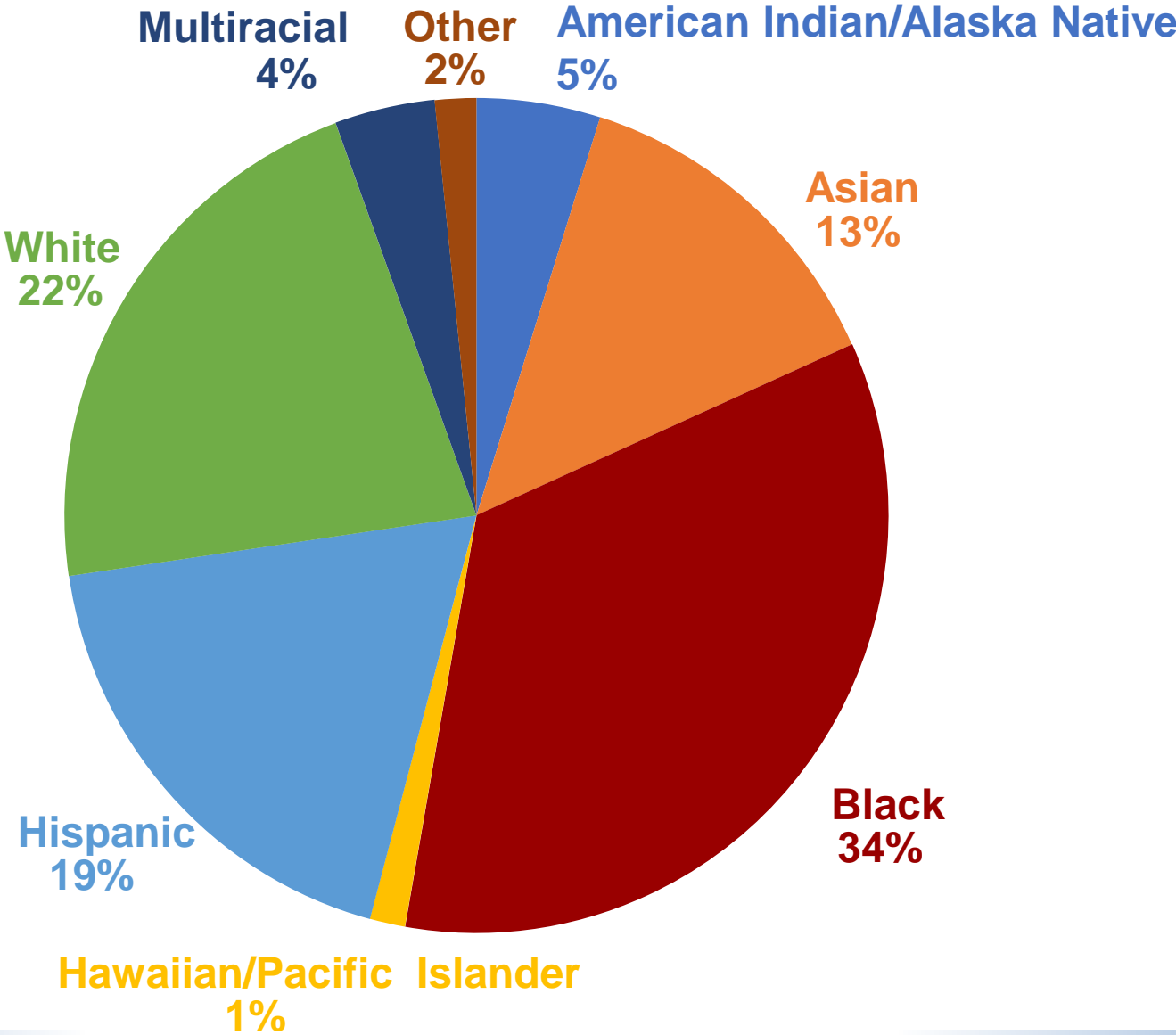


Surveys of self-efficacy

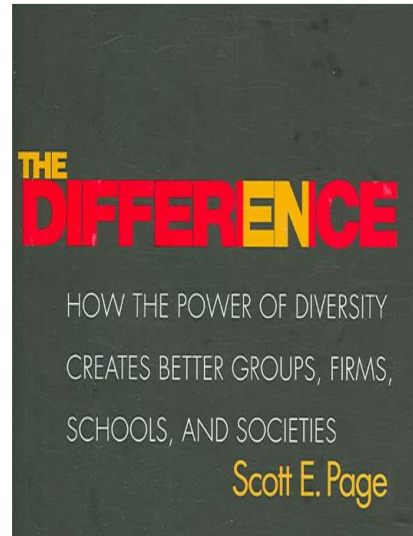
Hallmarks of success: presentations at meetings, publications, external funding



NRMN Grant-Writing Participants N=432



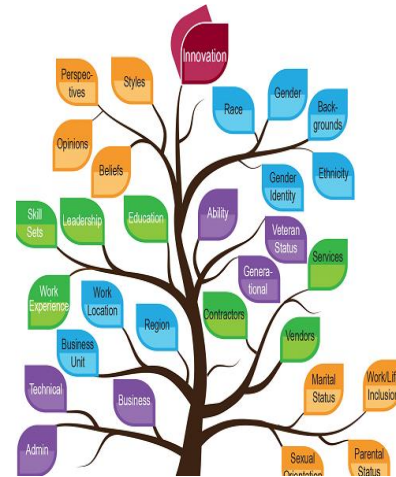
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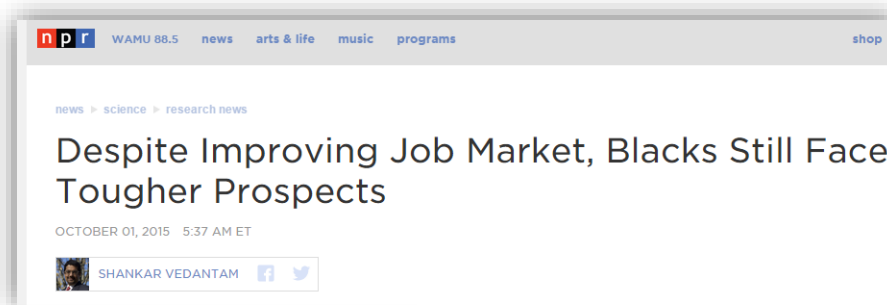
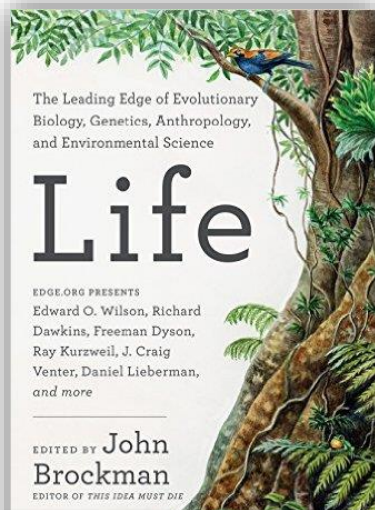


Sustainability

Valantine and
Collins. *PNAS* 2015:
Oct 6;112:12240-2



Bias is Pervasive in Science and Beyond



“Black name applicants in our study received about 14 percent lower call-back rates than otherwise identical white applicants.”

Recommendation letters for men:
Longer;
More references to CV, publications,

Rooted in Stereotypes and Begins Early

men are "strong, big, real, great or fastest"

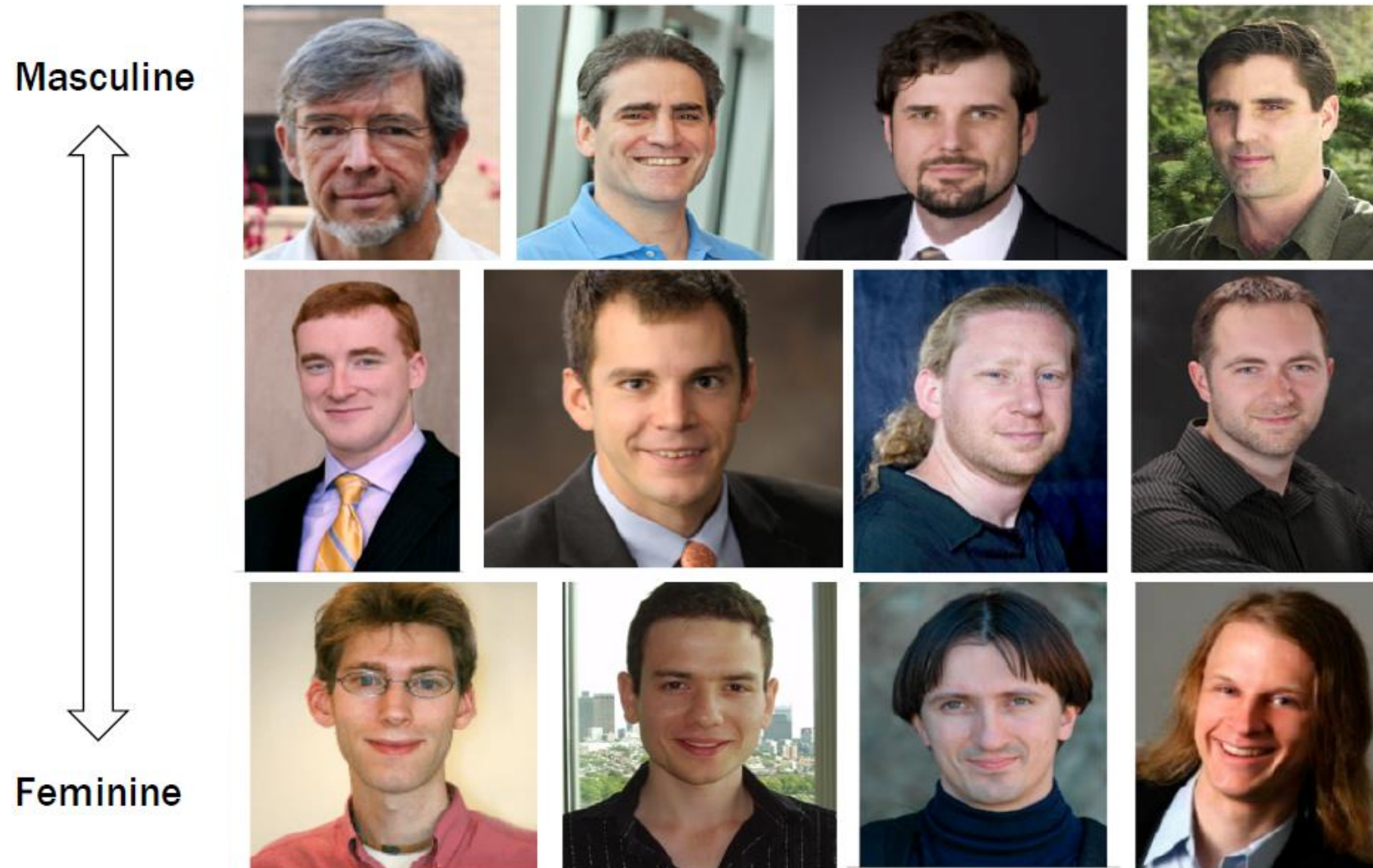
“ ... she became the third new mum to retain Olympic gold” ... “asked how she cares for her skin and how training affects her hair.”

Shorter;
More “doubt raisers” (hedges, faint praise, and irrelevancies);
More references to personal life

“It’s amazing how much she’s accomplished.”



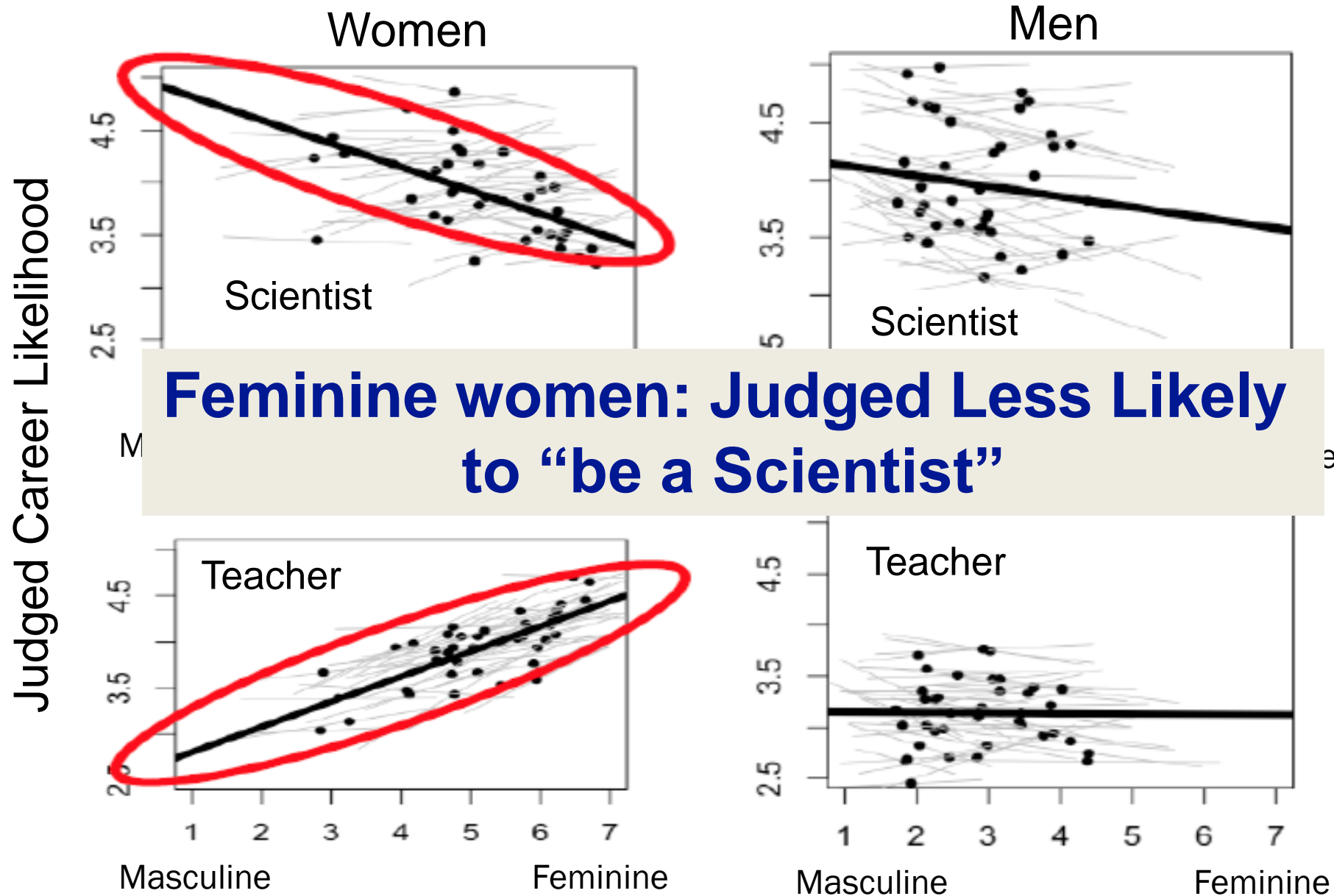
Study: “Who is a Scientist?”



Banchefsky, S., Westfall, J., Park, B., & Judd, C. M. (2016). But You Don't Look Like A Scientist!: Women Scientists with Feminine Appearance are Deemed Less Likely to be Scientists. *Sex Roles*, 1-15.

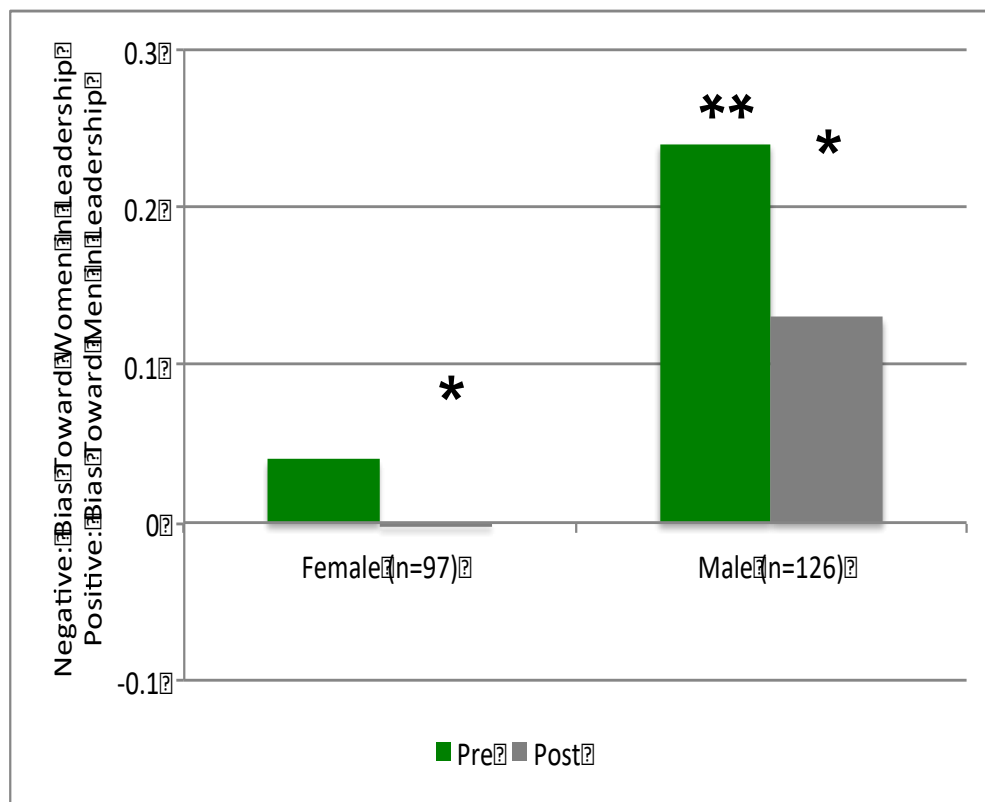


Study: "Who is a Scientist?"



Reducing Implicit Gender Leadership Bias in Academic Medicine With an Educational Intervention

Sabine Girod, MD, DDS, PhD, Magali Fassiotto, PhD, Daisy Grewal, PhD, Manwai Candy Ku, PhD, Natarajan Sriram, PhD, Brian A. Nosek, PhD, and Hannah Valantine, MD



Results of Intervention:

- Changed perception of implicit bias in males and females
- Reduced implicit bias about leadership and men



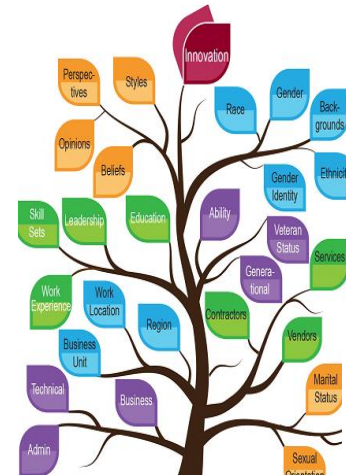
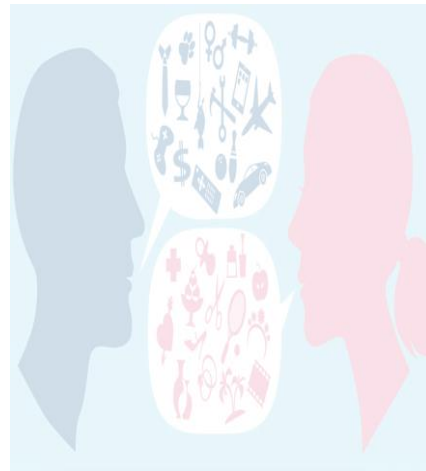
Diversity
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Sustainability
**Institutional
Accountability**

Valantine and
Collins. *PNAS*
2015: Oct
6;112:12240-2



Institutional Transformation and Culture Change

Programs are necessary but not sufficient:

Promote Transparency and Accountability

Link to Institutional Values and Reward Systems

- Systematic review and transparency of hiring and promotion procedures, policies
- Transparency: collect and publicize aggregate diversity metrics
- Provide tools to Divisions, Departments for enhancing recruitment and retention
- Evaluation of impact

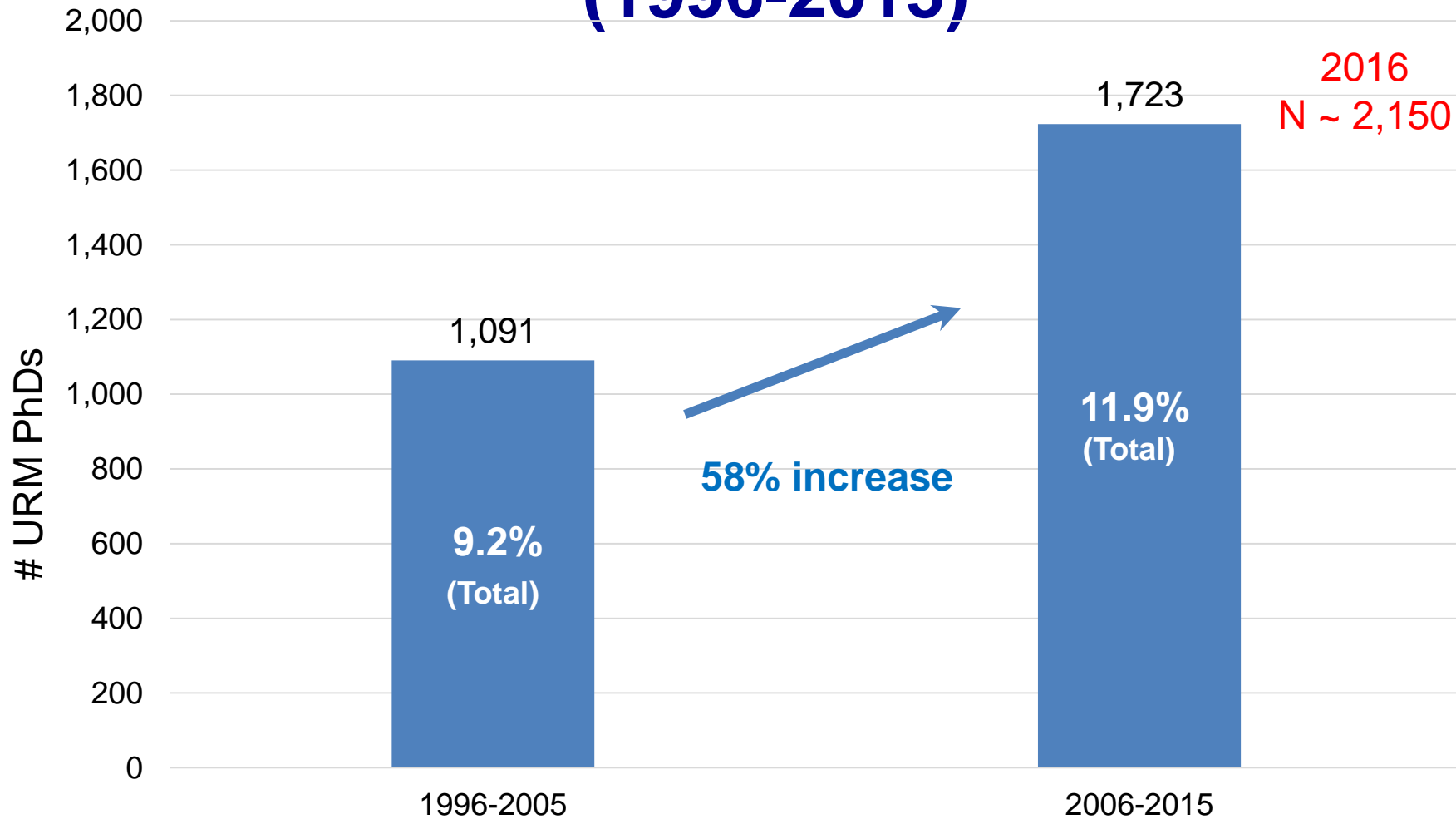


NIH Scientific Workforce Diversity: Achieving Inclusive Excellence

- NIH programs to enhance diversity have worked
 - Diverse talent is available
- NIH SWD Interactive Toolkit
- Transparency and accountability
 - NIH Equity Committee
- Distinguished Scholars Program
 - Building a self-reinforcing community of PIs committed to diversity and inclusion
- Sexual harassment prevention plan (scientific survey)

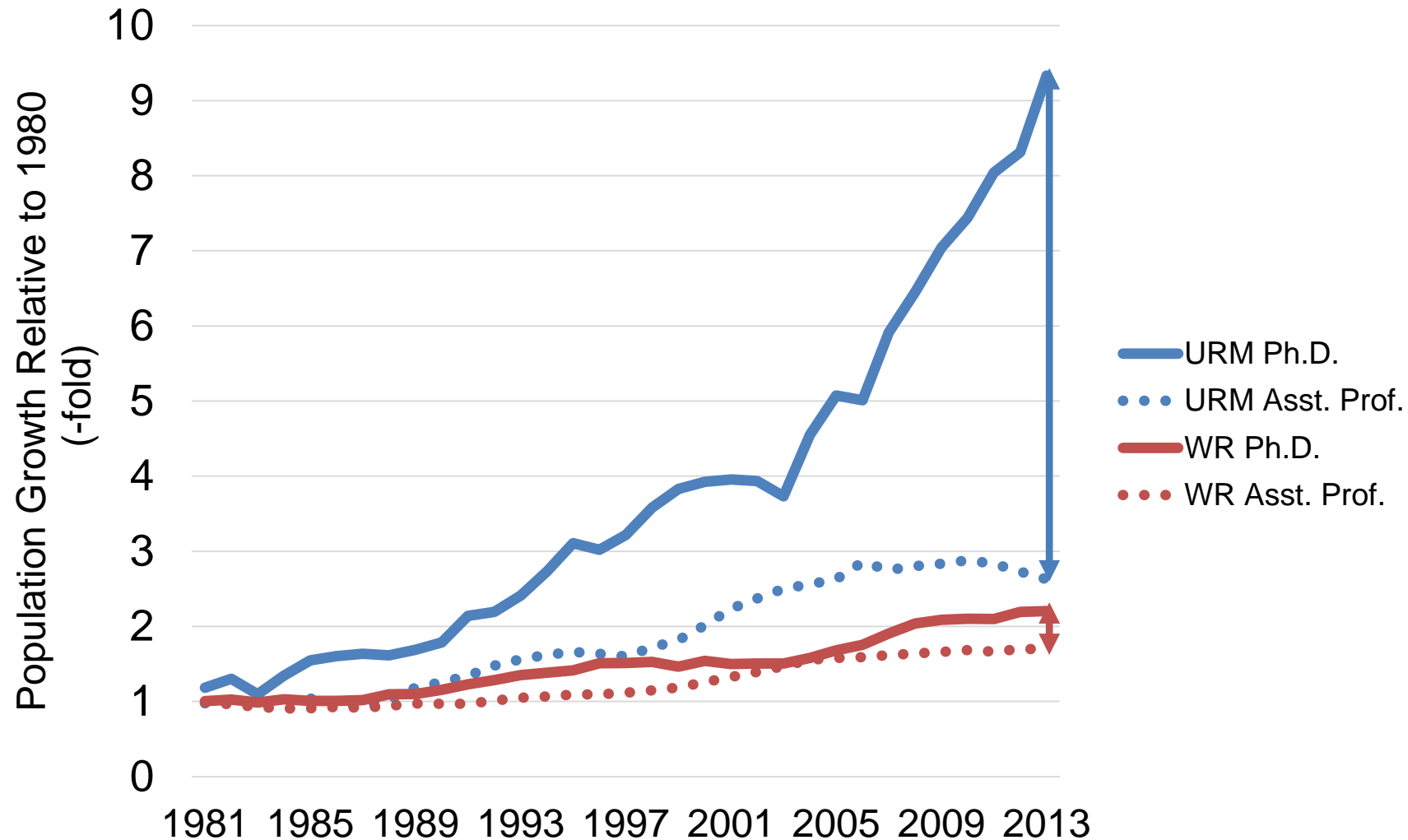


Increase in URM PhD Recipients (1996-2015)



NSF Survey of Earned Doctorates 1996-2015. Fields included: Biological Sciences (53%), Medical Chemistry (19.2%), Sciences (7.5%), Other Life Sciences (5.2%), Psychology (14.7%)

URM Assistant Professors: Lags Behind Growth in Ph.D. Recipients



Gibbs, K. D., et al. (2016). *Decoupling the minority PhD talent pool and assistant professor hiring in the medical school basic science departments in the US.*



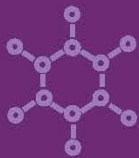
Introduction



Diversify the Talent Pool



Unbiased Talent Searches



Outreach and Networking



Mentoring Relationships

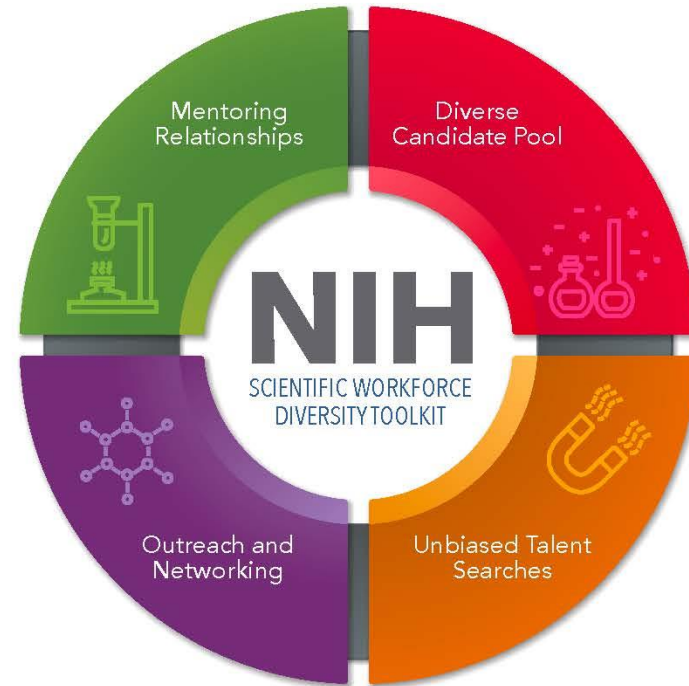
Citation Library

NIH Scientific Workforce Diversity Toolkit

The U.S. scientific research enterprise – from basic laboratory research to clinical and translational research to policy – requires intellect, creativity, and diverse skill sets and viewpoints.

Diversity

- ... enhances excellence, creativity, and innovation
- ... broadens the scope of biomedical inquiry
- ... addresses health disparities
- ... ensures fairness in our highly diverse nation



AAMC Toolkit Webinar at diversity.nih.gov

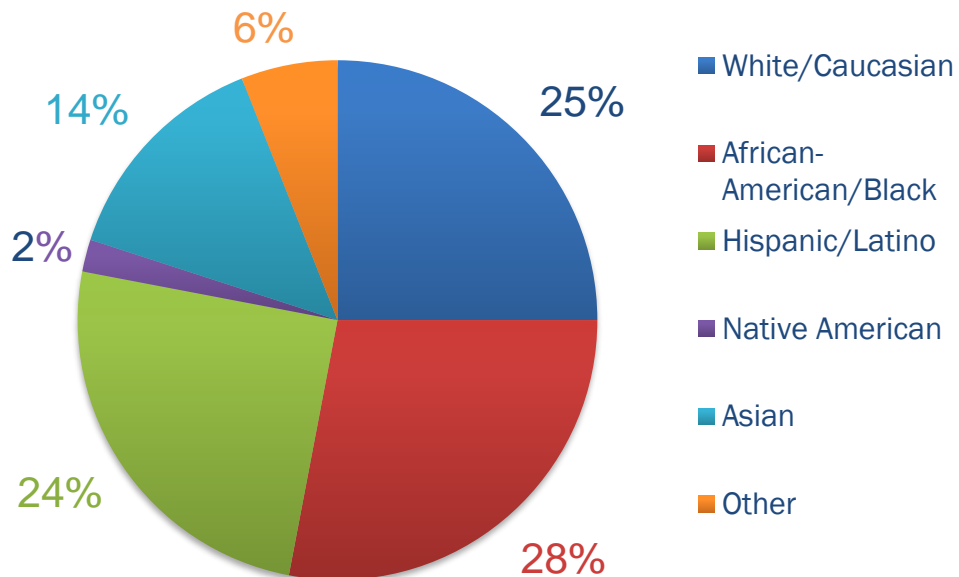
NIH Results: Enhancing Diversity of Candidate Pools at Early Career Stage

Post-Doctoral and Assistant Professors

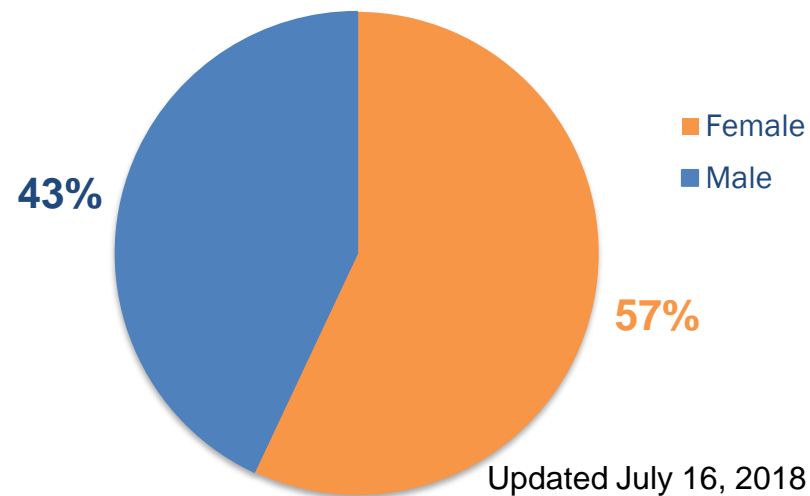
~ **739** total, top 1/3rd culled
 4-10 years post-doctorate (most 4-7)
 Authorship in top journals
 10+ publications: 457
 100+ citations: 534
 200+ citations: 406



Race/Ethnicity



Gender



Updated July 16, 2018

NIH Equity Committee

Metrics for Annual Evaluation



- Tenured and tenure-track investigators analyzed separately
 - Demographic data,
 - Salaries, resources for hiring
 - Equity of review practices
 - Boards of Scientific Counselors and ad hoc reviewers, promotion, and tenure committees
 - Efforts to correct identified inequities
- Efforts to promote diversity, equity, inclusion
 - Diversity of speakers at seminars hosted by the IC
 - Promote awareness of implicit bias
 - Best practices for search committees and outreach
 - Award nominations
 - Input on how Office of Intramural Research and SWD can support the ICs

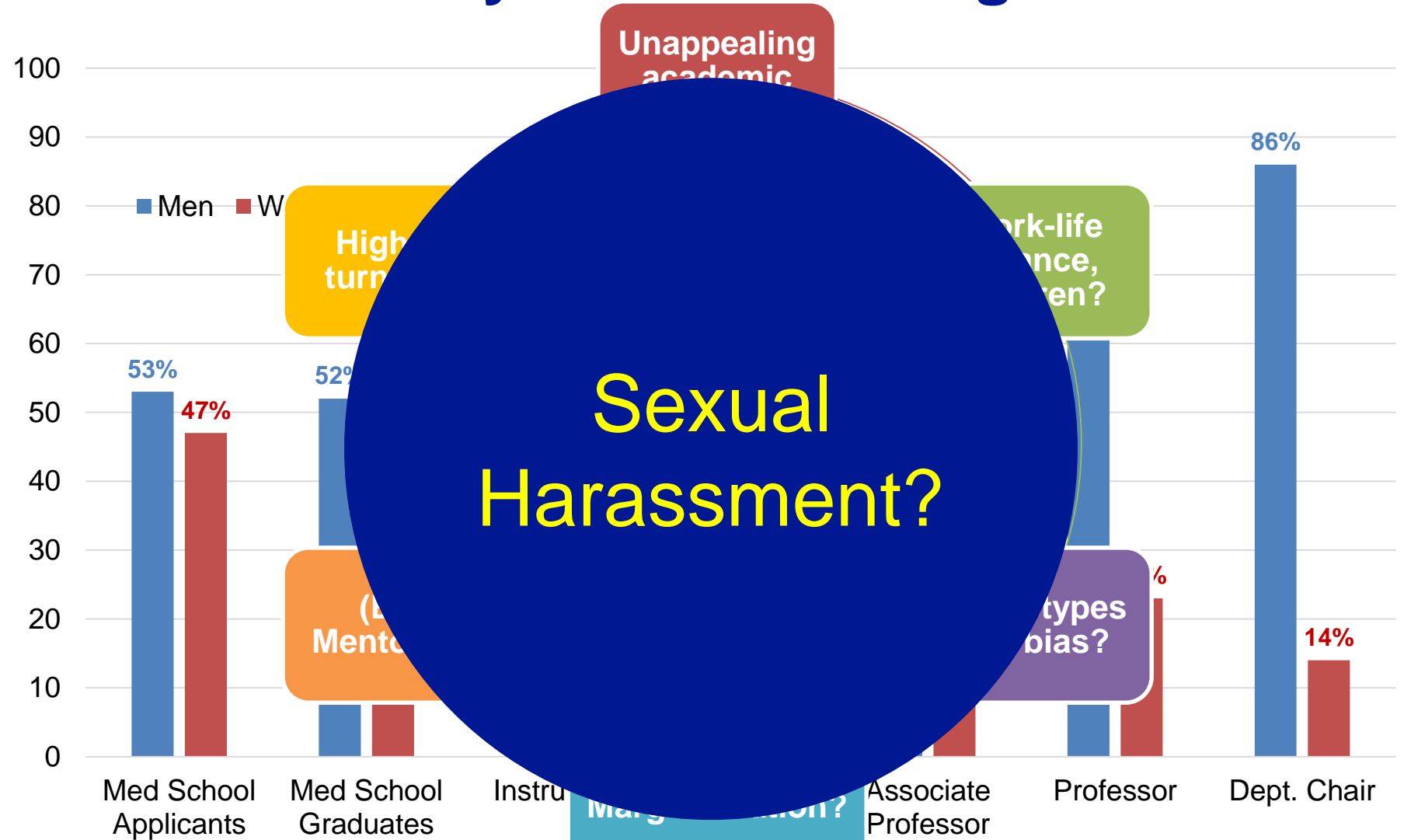


Enhancing Diversity of Tenure-Track Investigators in NIH IRP: *Distinguished Scholars Program*

- Identify and appoint vetted pool of 10-15 scientists that enhance diversity (broadly defined)
 - Trajectory - independent investigator
- Eliminate or minimize implicit bias in hiring process
- Accelerate hiring process of the cohort
- Create culture of inclusion: Cohort-focused activities (mentoring, networking – formal and informal)
- Institutional change: Equity, transparency

Launched September 2018: Translatable to other academic institutions

Gender Diversity Declines Along Career Path



www.aamcdiversityfactsandfigures2016.org/report-section/section-5/medical-schools/#tablepress-31 (Med School, 2015)
www.aamc.org/download/475530/data/16table13.pdf (Faculty, 2016)
www.aamc.org/download/411920/data/2014_table11.pdf (Dept Chairs, 2014)

National Academies of Science, Engineering, and Medicine* (NIH Co-Sponsored) Consensus Study Report - June 2018



..the cumulative effect of sexual harassment is a significant and costly loss of talent in academic science, engineering, and medicine, which has consequences for advancing the nation's economic and social well-being and its overall public health.

*NASEM - Committee on Women in Science, Engineering, and Medicine

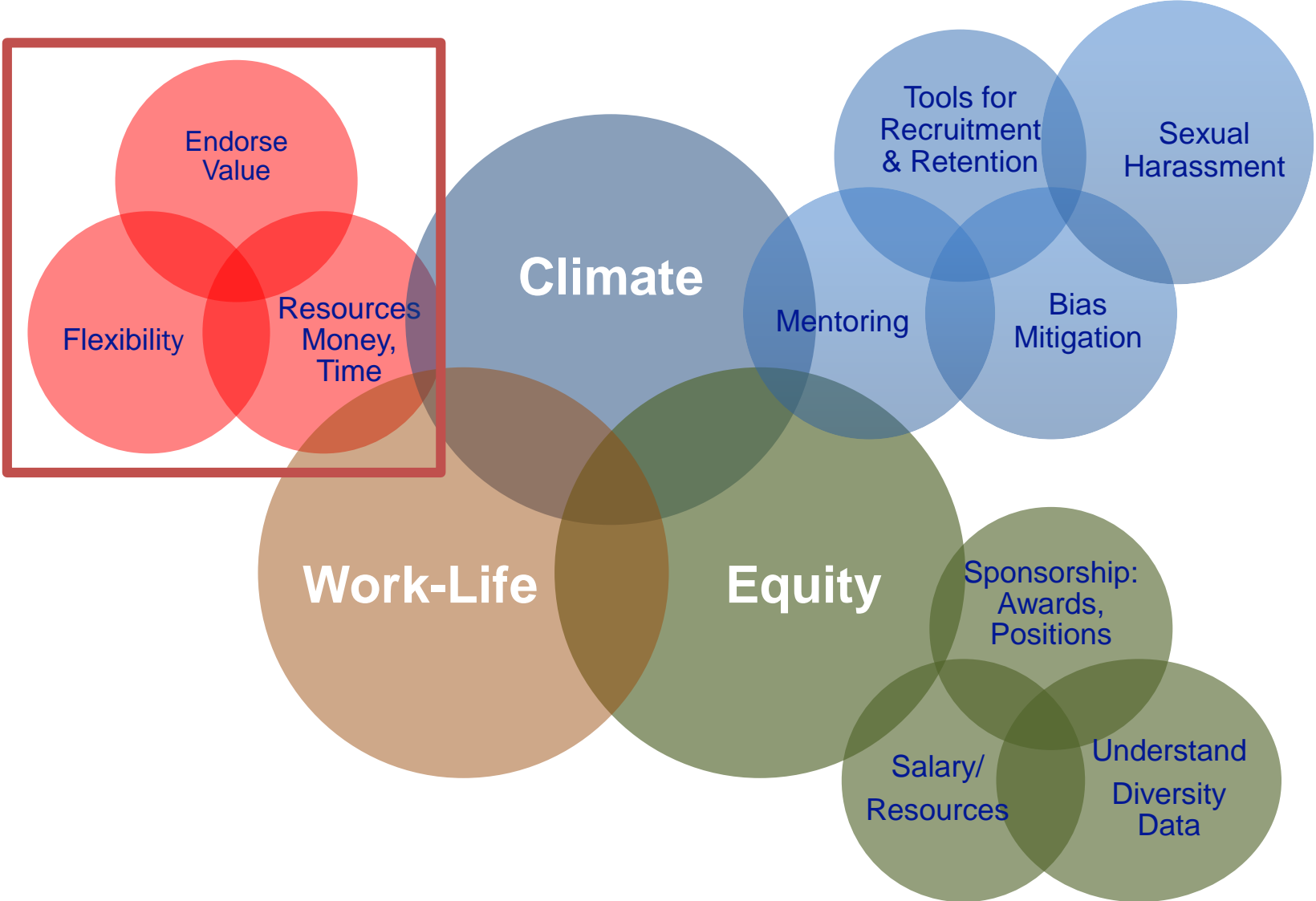
NIH Sexual Harassment Prevention Plan Components

- Agency anti-harassment policy and prevention plan
- Awareness of policy and harassment prevention plan
 - Education and communication plan
- Sexual harassment reporting (hotline)
- Trans-NIH committee to recommend disciplinary action
- Mandatory sexual harassment training
- NIH sexual harassment survey

Constructed with a trans-NIH group



Institutional Leadership Drives Culture Change



Academic Biomedical Career Customization (ABCC): Stanford School of Medicine

MISSION: Establish a culture that fosters work-life integration and development to *recruit, retain, advance the most talented physicians and scientists in academic medicine*

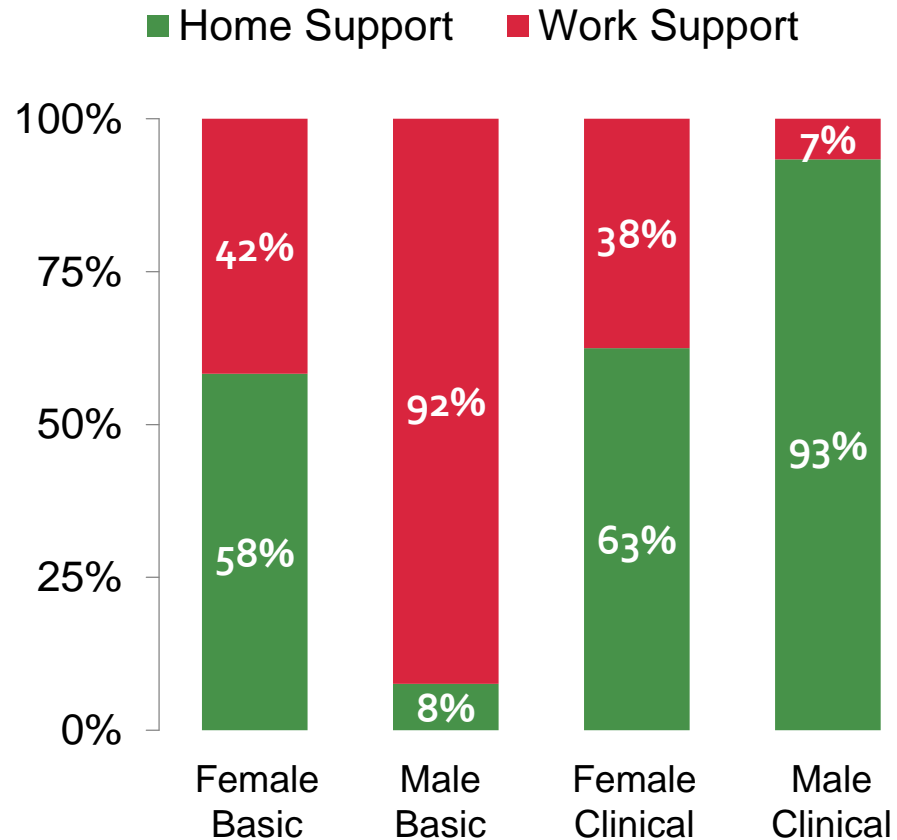
PRINCIPLES: Recognize diversity of needs; foster transparency; increase faculty collaboration

1 Customized
Career Tracks

2 Flexible Support
Mechanisms

ABCC Banking System Preliminary Results: Support Services

Use of Home and Work Support Services by Pilot Participants



Survey Results Post-Evaluation

- **84%:** support mechanisms improved work-life fit.
- Proportion of faculty reporting postponing/avoiding taking vacation due to lack of time in the past 12 months: **64%→39%**.
- Across clinical teams, proportion of faculty volunteering to fill a clinical service on short notice to help a colleague: **44%→83%**.
- Across basic science teams, proportion of faculty reporting adequate time to discuss science with colleagues: **9%→55%**.
- Among female faculty, proportion who agree with the statement “Stanford School of medicine supports my career development”: **29%→57%**.

NIH Recommendations: Achieving Inclusive Excellence

- Use unbiased approaches to find and keep talent
 - Avoid word-of-mouth networks
 - Implicit-bias awareness and mitigation
 - Look for diverse talent – don't expect it will find you
- Transparency and accountability
 - Measure and publicize diversity data
- Inclusive excellence starts at the top – culture
 - Climate
 - Equity
 - Work-life integration





About Us

Science of
Diversity

Building
Evidence

Sociocultural
Factors

Sustaining
Diversity

Find, Read,
Learn

Programs &
Partnerships

Science of Diversity

Diversity Leads to Innovation

LEARN MORE ▶



Science of Diversity



Building Evidence



Sociocultural Factors



Sustaining Diversity

diversity.nih.gov





Great minds
think differently ...



@NIH_COSWD



National Institutes of Health
Office of the Director
Scientific Workforce Diversity

