Diversity = Excellence

Under-representation: A Call to Action
NIH: Under-representation

• **Under-represented**: under represented in numbers that are disproportionately low compared to the population.

• Women now earn more than half of the PhDs conferred each year in the life sciences, but they comprise less than half of the assistant professors and few of the full professors; in this way, women are under-represented at the assistant and full professor faculty levels.
Under-represented in Biomedical Research (NIH)

- Under-represented racial and ethnic groups: Blacks or African Americans, Hispanics or Latinx, American Indians or Alaska Natives, Native Hawaiians, and other Pacific Islanders.
- Individuals with disabilities
- Disadvantaged backgrounds
- Women
Q. Why Diversity? A. Diversity Makes You Brighter

- Individuals competed in groups to find accurate answers in predicting stock prices
- Answers were 58% more accurate in diverse groups than in homogeneous groups
- More time spent in interacting in diverse groups = more accurate answers
- Diversity > cognitive friction, disrupts conformity = better critical thinking for all, improved error detection, more accurate answers

White, 68.6%
Asian; 17.0%
Hispanic, 3.5%
Black, 1.1%
AIAN, 0.2%
Pacific Islanders, 0.1%
2+ Racial Groups, 1.4%
Missing 0.7%

AAMC Full Time Faculty, 2016 (n=163,125)

7.7% URM
Source: AAMC
Courtesy Dr. Leo Morales

UWSOM Ladder Faculty Diversity, 2018 (n=2,288)

4.8% URM
Source: UW EOAA Office, 2018
School of Medicine: Percent URM by Department, 2018

Anesthesiology and Pain Medicine: 7.7%
Biochemistry: 6.3%
Biomedical Informatics and Medical Education: 6.5%
Comparative Medicine: 6.3%
Emergency Medicine: 6.5%
Family Medicine: 6.3%
Genome Sciences: 6.3%
Global Health and Med Health Metrics: 9.1%
Laboratory Medicine: 6.9%
Immunology: 13.8%
Microbiology: 8.7%
Neurological Surgery: 11.4%
Obstetrics and Gynecology: 6.9%
Ophthalmology: 6.9%
Pathology: 6.5%
Pediatrics: 6.9%
Physiology and Biophysics: 6.5%
Psychiatry and Behavioral Sciences: 6.9%
Radiation Oncology: 6.9%
Rehabilitation Medicine: 6.9%
Surgery: 6.7%
Urology: 6.7%

SOM Average 4.8%
School of Medicine: Percent Female by Department, 2018

SOM Average: 40%
Common Terms

**Structural racism:** The macrolevel systems, social forces, institutions, ideologies, and processes that interact with one another to generate and reinforce inequities among racial and ethnic groups. (Powell 2008)

**Stigma:** The process by which certain human characteristics are labeled as socially undesirable and linked with negative stereotypes about a class of individuals, resulting in social distance from or discrimination towards labeled individuals. (NIH)
Common Terms

- **Bias**: an attitude that projects favorable or unfavorable dispositions toward people
- **Stereotype**: shared set of beliefs, fixed impression of a group
- **Prejudice**: negative attitudes and beliefs about out-group vs. in-group
- **Discrimination**: behavioral manifestation of bias, stereotyping, and prejudice, the way others are treated
## Social Determinants of Health

<table>
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<tr>
<th>Economic Stability</th>
<th>Neighborhood and Physical Environment</th>
<th>Education</th>
<th>Food</th>
<th>Community and Social Context</th>
<th>Health Care System</th>
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</thead>
<tbody>
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<td>Employment</td>
<td>Housing</td>
<td>Literacy</td>
<td>Hunger</td>
<td>Social integration</td>
<td>Health coverage</td>
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<tr>
<td>Income</td>
<td>Transportation</td>
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<td>Access to healthy options</td>
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<tr>
<td>Expenses</td>
<td>Safety</td>
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<td>Debt</td>
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<td>Medical bills</td>
<td>Playgrounds</td>
<td>Higher education</td>
<td>Community engagement</td>
<td>Provider linguistic and cultural competency</td>
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<tr>
<td>Support</td>
<td>Walkability</td>
<td></td>
<td>Discrimination</td>
<td>Quality of care</td>
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<td>Zip code / geography</td>
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<td>Stress</td>
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### Health Outcomes
- Mortality, Morbidity, Life Expectancy
- Health Care Expenditures
- Health Status
- Functional Limitations

[KFF](https://www.kff.org)
IMPLICIT BIAS:
Unintentional Bias, Good Intentions, Microaggressions

AKA: UNCONSCIOUS BIAS, HIDDEN BIAS
Implicit Bias: Definition

“attitudes or stereotypes that affect our understanding, decision making, and behavior, without our even realizing it”

How our Minds Work

• First impressions are made quickly (snap judgments)

• Favoring “people like me”

• Automatic associations
  o implicit/explicit associations
  o absorb messages from our culture
Bias is Contagious

• Just observing a biased person express subtle negative bias toward a black person may shift observers racial bias

• Others’ biases may “creep into our minds and infect our behaviors”

• Flip side: observing and modeling positive behaviors can shape society to be more egalitarian

Willard, Isaac, Carney, 2015
Bias Category: Intellectual Inferiority

- The Bias: women are deficient in rational thinking (math, science)

- Manifestation: Spoken to a woman – “You articulate so well.”
Institutional Climate

URM faculty report:

- Difficulty in cross cultural relationships
- Isolation and feeling invisible
- Lack of mentors/role models
- Disrespect, overt and covert bias/discrimination
- Unfair burden of being identified with affirmative action
- Financial hardship

Pololi, Cooper, Carr, 2010
Bias in Academic Science

A nationwide sample of biology, chemistry, and physics professors (n=127) evaluated application materials of an undergraduate science student (female or male) for a lab manager position. Both male and female faculty rated the female student as:

- Less competent
- Less hireable
- Offered her lower salary ($3.7K)
- Offered less mentoring

Even though the female was rated more likeable!

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https://diversity.nih.gov/toolkit
Implicit Race Bias: Academic Employment

- Identical CVs, lecturer post, manipulated by name and photo, asked to review and recommend 2/4 candidates for interview

- White participants with high implicit race bias were **ten times more likely** to select two white candidates for interview than two non-white candidates, despite identical CVs

- Higher implicit race bias- more time looking at positive information in white candidate CV and less time looking at positive information in black candidate CV

Beattie, et al., 2013
Pregnancy Discrimination

• Pregnant women and mothers perceived as: less committed, steered away from prestigious assignments, slighted on bonuses, less dependable, more irrational

• Each child takes away 4% of mother’s hourly wages but adds an increase of 6% to father’s wages (controlled for experience, education, marital status, hours worked)

• (Stanford) found “motherhood penalty” – managers twice as likely to hire childless woman than candidate with a child

Kitroeff & Silver-Greenberg, June 15, 2018, NYT
Call to Action

• Collect data
• Best Practices to foster diversity
• Departmental diversity plan, with plans of action
• Faculty search plan
• Monitor climate
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
Applicant Pool

URM Pool for Transition into the Biomedical Research Workforce

https://diversity.nih.gov/toolkit
“Data Driven Recommendations”

Most promising:

• Research area of interest in job description mentioned diversity related concerns. (i.e. labor and women’s history)

Promising

• Intensive Outreach (direct recruitment of women and URM)
• Prioritize diversity
• Diverse search committee
• Finalists meet with campus groups/individuals- diversity

*Searching for a Diverse Faculty*, University of California, Berkeley, 2018
Expectations of Brilliance

Hypothesis: Fields that believe “giftedness” or innate intelligence is main requirement for success will have less women and African Americans

- Perceptions of “special aptitude that just cannot be taught” needed to be successful in the field, controlled for hours worked, GRE scores, selectivity, other

Results:

- The more a field valued “giftedness”, the fewer female PhDs
- Fields that emphasize raw talent, more likely to endorse idea women not suited for high-level scholarly work
- Field-specific ability beliefs were only predictor of women and African American representation in the field
- **Recommend- emphasize sustained effort rather than “giftedness” for top level success**

Leslie, et al., 2015
Great minds think differently …

@NIH_COSWD
Thank You
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