NIH Advisory Committee to the Director: Working Group on Diversity Update

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NIH Chief Officer for Scientific Workforce Diversity

113th NIH ACD Meeting | December 8, 2016

National Institutes of Health
Office of the Director
Scientific Workforce Diversity

NIH Advisory Committee to the Director Working Group on Diversity

Elba Serrano, PhD, *Co-Chair*

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David Asai, PhD

John Dovidio, PhD

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13 Recommendations from the 2012 Report of the ACD WGDBRW

Mentoring, Career Development, Recruitment, Retention

- ✓ Support for Underserved Institutions
- ✓ Mentoring Networks
- ✓ Undergraduate Scholarships
- ✓ IRP Diversity
- ✓ K-12 Support

Research and Intervention Recommendations

- ✓ Review Feedback for All Applications
- ✓ Racial Funding Disparity
- ✓ Peer Review Working Group
- ✓ Bias Education
- ✓ Anonymous Bias Study

NIH Institutional Support and Oversight Recommendations

- ✓ Chief Officer for Scientific Workforce Diversity
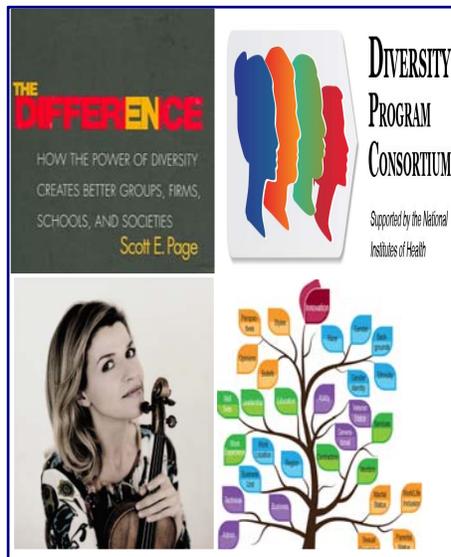- ✓ ACD Working Group on Diversity
- ? Tracking and Evaluation

SWD Mission: *NIH leads and catalyzes scientific workforce diversity through data-driven innovations to recruit and retain the most talented scientists*

PNAS

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

Diversity Science

THE DIFFERENCE
HOW THE POWER OF DIVERSITY CREATES BETTER GROUPS, FIRMS, SCHOOLS, AND SOCIETIES
Scott E. Page

DIVERSITY PROGRAM CONSORTIUM
Supported by the National Institutes of Health

Mentoring, Career development Recruitment, Retention: What Works and Why? Context matters

Sociocultural Factors

Sustaining Diversity

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)

Outcome measures

- Student
- Faculty
- Institutional

Hypotheses Being Tested by BUILD

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

NRMN Activities

- Guided virtual mentorships
- MyNRMN tool
- Mentors trained: 250
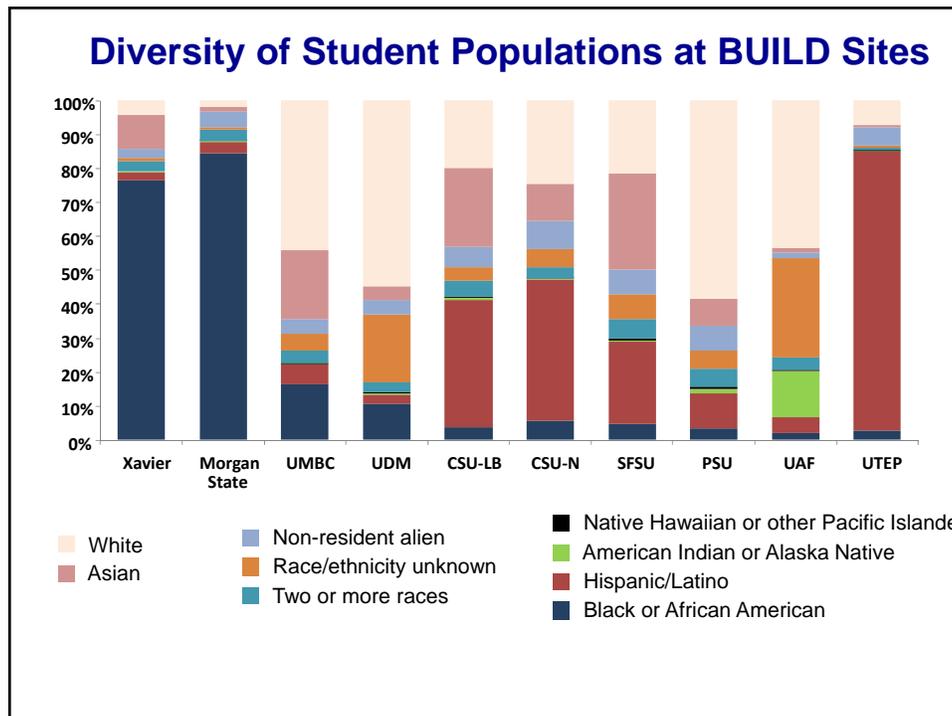- Mentee/mentors touched 3,100
- Grantwriting/coaching - mentees: 225

Hispanic-Serving Institutions

Historically Black Colleges and Universities

Total of 10 Sites/Experiments

State Colleges

Public Universities

Diversity of Student Populations at BUILD Sites

Legend:
- White
- Asian
- Non-resident alien
- Race/ethnicity unknown
- Two or more races
- Native Hawaiian or other Pacific Islander
- American Indian or Alaska Native
- Hispanic/Latino
- Black or African American

Sites: Xavier, Morgan State, UMBC, UDM, CSU-LB, CSU-N, SFSU, PSU, UAF, UTEP
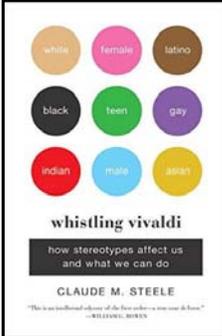
SF BUILD
enabling students to represent in science

- Stereotype threat interventions at all levels
  - <u>Students</u>: Speaking Truth to Power
  - <u>Faculty</u>:   Tools to create safe environments
                Depiction of faculty as essential change agents
  - <u>Institutional</u>: Curricular development and infrastructure for research relevant to local communities
  - Renovations - Interdisciplinary facilities for cross-institutional collaboration
  - Health equity research

- Two-institutional model
  - Teaching with research intensive (UC + SF-State U)
  - Joint core facility (UCSF and SFSU)
  - Training interventions
  - Undergraduate to graduate transitions
  - Sustainable strategies for addressing stereotype threat

white female latino
black teen gay
indian male asian

whistling vivaldi

how stereotypes affect us
and what we can do

CLAUDE M. STEELE

Student-Centered Entrepreneurship Development (ASCEND)

MORGAN STATE UNIVERSITY

ASCEND

- Undergraduate entrepreneurial research training model
  - Support: faculty advisor; coordinator
- Student-led research center:
  - Space for research, mentoring, and networking
- Beginning with an 8-week summer research institute:
  - Group proposals, selection as ASCEND scholars

- Accelerate hands-on research experiences, knowledge, and recruitment/retention in biomedical careers

Measuring Success in Mentoring and Training

DIVERSITY PROGRAM CONSORTIUM
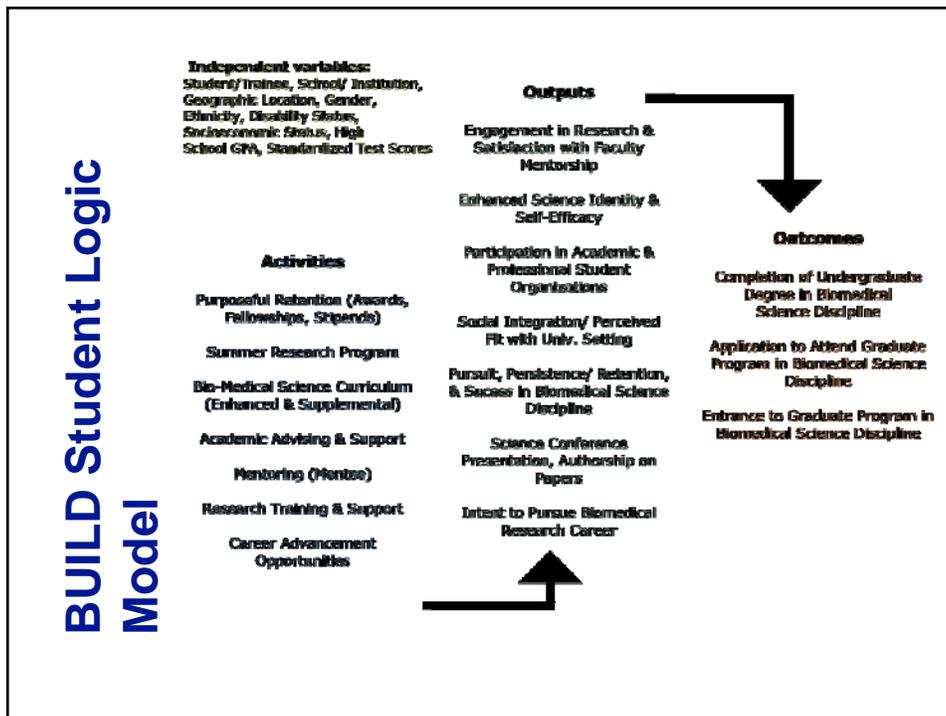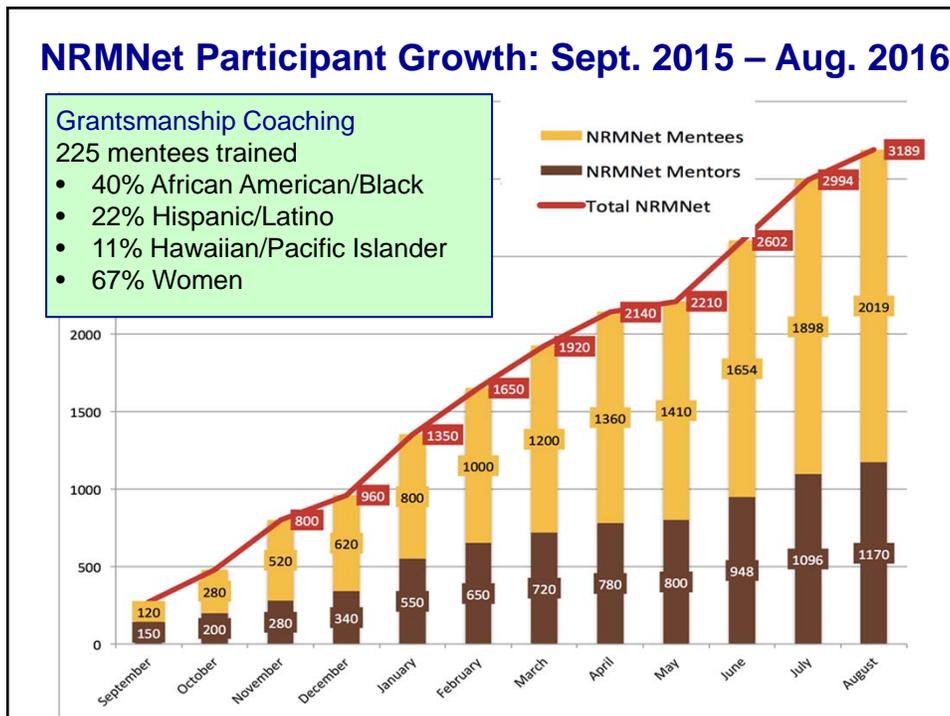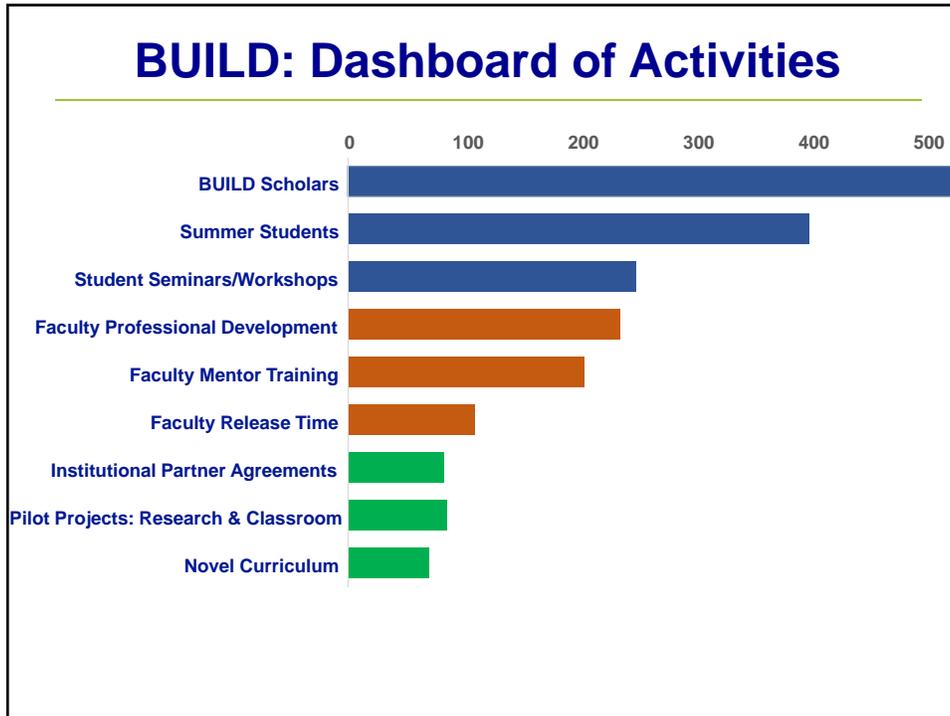*Supported by the National Institutes of Health*

Individual Level Hallmarks

- Perceptions: culture, identity
- Persistence, retention, GPA
- Undergrad lab training
- Presentations at meetings
- Research fellowships, scholarships
- Authorship in peer-reviewed publications
- Application to grad program
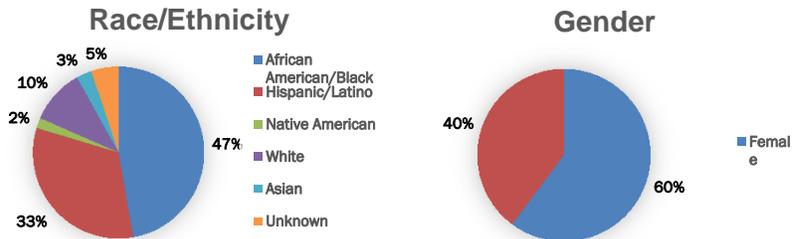- Matriculation in grad program

Institutional Level Hallmarks

- Undergrad retention rate
- Mentoring activities (students, faculty)
- URM retention in BUILD
- Research training opportunities (students, faculty)
- Inter-institutional collaborations for BUILD outcomes:
  - Linkages with community colleges, other partners
  - Collaborations at R1 schools
  - NRMN engagement

BUILD Student Logic Model

Independent variables:
Student/Trainee, School/Institution, Geographic Location, Gender, Ethnicity, Disability Status, Socioeconomic Status, High School GPA, Standardized Test Scores

Activities

Purposeful Retention (Awards, Fellowships, Stipends)

Summer Research Program

Bio-Medical Science Curriculum (Enhanced & Supplemental)

Academic Advising & Support

Mentoring (Mentee)

Research Training & Support

Career Advancement Opportunities

Outputs

Engagement in Research & Satisfaction with Faculty Mentorship

Enhanced Science Identity & Self-Efficacy

Participation in Academic & Professional Student Organizations

Social Integration/ Perceived Fit with Univ. Setting

Pursuit, Persistence/ Retention, & Success in Biomedical Science Discipline

Science Conference Presentation, Authorship on Papers

Intent to Pursue Biomedical Research Career

Outcomes

Completion of Undergraduate Degree in Biomedical Science Discipline

Application to Attend Graduate Program in Biomedical Science Discipline

Entrance to Graduate Program in Biomedical Science Discipline

BUILD: Dashboard of Activities

NRMNet Participant Growth: Sept. 2015 – Aug. 2016

Grantsmanship Coaching
225 mentees trained
- 40% African American/Black
- 22% Hispanic/Latino
- 11% Hawaiian/Pacific Islander
- 67% Women

Recruiting Tool for Junior Career Stage
Postdoctoral and Assistant Professors

Race/Ethnicity

- African American/Black
- Hispanic/Latino
- Native American
- White
- Asian
- Unknown

5%
3%
10%
2%
47%
33%

Gender

- Female

40%
60%

- ~ 543 total, top 1/3rd culled
- 4-10 years post-doctorate (most 4-7)
- Authorship in top journals
- 10+ publications: 188
- 100+ citations: 198
- 200+ citations: 136

PLOS | ONE

JAMA
The Journal of the American Medical Association

the NEW ENGLAND JOURNAL of MEDICINE

Endocrinology

BMC Pediatrics

Neuron

JNeurosci
THE JOURNAL OF NEUROSCIENCE

nature immunology

2016 | NIH FUTURE RESEARCH LEADERS CONFERENCE
SEPTEMBER 13-15 | NIH Main Campus

#GREATMINDS THINK DIFFERENTLY...
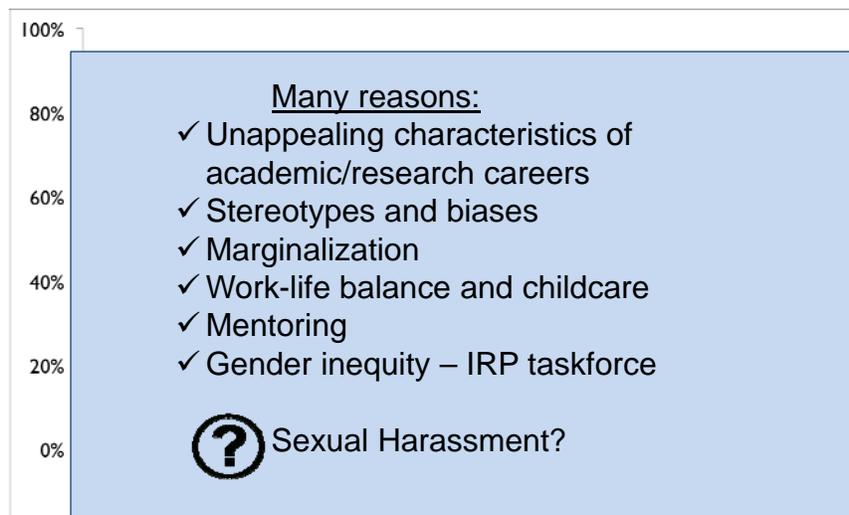
FRLC@NIH.GOV

Outreach Tools

Trans-NIH effort to engage talented early-stage biomedical and behavioral scientists from diverse backgrounds to promote knowledge and awareness about scientific career opportunities in the NIH intramural research program

Unconscious Bias Education
Pilots in IRP Stadtman Search

- Raise awareness of unconscious bias and reduce its impact in the search process
- Test feasibility
- Scientifically test the efficacy of the educational module

  - Does unconscious bias education affect the Stadtman search process and outcomes?

  - Pre- and post-measurements of implicit/explicit bias

Gender Gap in Academic Medicine 2013-2014

Many reasons:
- ✓ Unappealing characteristics of academic/research careers
- ✓ Stereotypes and biases
- ✓ Marginalization
- ✓ Work-life balance and childcare
- ✓ Mentoring
- ✓ Gender inequity – IRP taskforce

(?) Sexual Harassment?

Adapted from: The state of women in academic medicine 2013-14: AAMC Report, Diana M. Lautenberger, et. al.

Components of the Overall Anti-Sexual Harassment Plan

Constructed with a Trans-NIH Group

- Agency policy for Manual Chapters
- Agency guidelines to edify the policy
- Contract for sexual harassment hotline
- IDIQ for administrative inquiry investigators
- Mandatory sexual harassment training with Outlook suspension
- Trans-NIH committee to recommend discipline to the IC
- ***NIH Workplace Climate and Harassment Survey***
- communications plan

ACD DWG – Subcommittee on Workplace Climate and Harassment

- Charge: Advise on NIH analysis of how workplace and/or climate may be affecting individual's career and the diversity of our workforce
- Survey: Guidance on NIH workplace climate and harassment survey design, administration, analysis, and dissemination of results
- Members:

Jon Krosnick, Ph.D., Professor, Humanities & Social Sciences, Communication, and Political Science, Stanford University

Louise Fitzgerald, Ph.D., Professor Emerita, Psychology and Gender & Women's Studies, University of Illinois

Lilia Cortina, Ph.D., Professor, Psychology, Women's Studies, and Management, University of Michigan

John Pryor, Ph.D., Professor Emeritus, Psychology, Illinois State University

Sustainability
Underrepresentation is Not Just a Pipeline Issue

- URG PhD recipients have grown 9-fold in past 35 years, compare to 2.2-fold increase in well-represented groups*

- Annually, 10% of biomedical PhDs are awarded to URGs, yet only 2.6% faculty hires are URG scientists*

- Pipeline programs are necessary but not sufficient

- Need more focus on transition points especially from training into academic careers
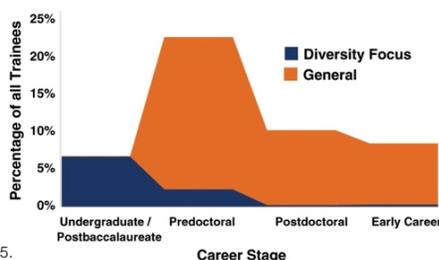
Valantine et al., CBE—Life Sciences Education • 15:fe4, 1–5,2016

* Gibbs KD, et al. Elife. 2016 Nov 17;5.

Summary:
Key Accomplishments Since 2012

Extramural

- Diversity Consortium Program: BUILD, NRMN, CEC
- Future Research Leaders Conference and outreach platform
- ACD DWG Subcommittee on Potential Bias in Peer Review
- African American/Black R01 Funding Disparities Interventions
  - R01 re-submission awareness
  - Mentoring and coaching to improve score and award rate
  - Anonymized review study

Intramural

- Hi-STEP; Graduate summer program
- Search tools enhance applicant-pool diversity
- Outreach process to enhance success in recruiting
- Unconscious bias educational platform

**ACD Working Group on Diversity:
Going Forward**

- Progress report (5-year progress)

- Request for Information and additional input

- New recommendations

Great minds think differently …

@NIH_COSWD

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