

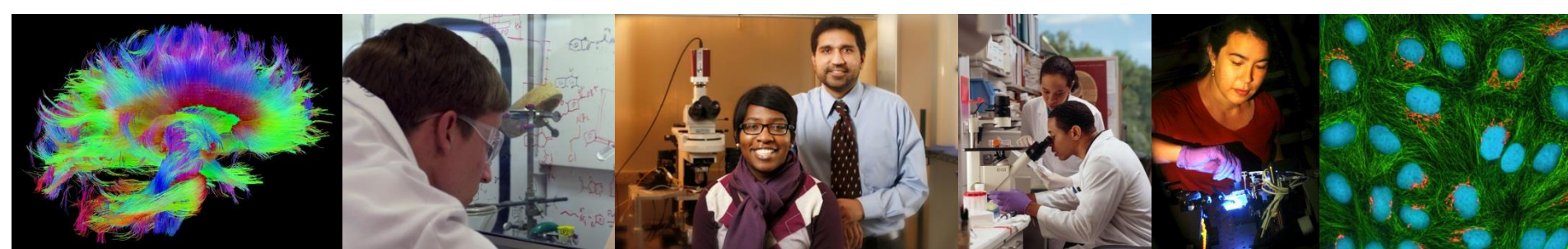
NIH Scientific Workforce Diversity ACD Diversity Working Group Updates

Hannah A. Valantine, MD

Roy Wilson, MD

NIH Chief Officer for Scientific Workforce Diversity

115th NIH ACD Meeting | December 14, 2017



National Institutes of Health
Office of the Director
Scientific Workforce Diversity

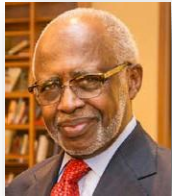
NIH Advisory Committee to the Director Working Group on Diversity



Roy Wilson, MD
Co-Chair



Hannah Valentine, MD,
Co-Chair



George Hill, PhD



Iris Romero, MD, MS



Alison Gammie, PhD



David Asai, PhD



Richard Nakamura, PhD



Florastina Payton-Stewart, PhD



Nanibaa' Garrison, PhD



Elba Serrano, PhD



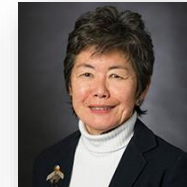
Gordon Moskowitz, PhD



Sherilynn Black, PhD



Nelson Sanchez, MD



Rae Nishi, PhD



Edwin Barea-Rodriguez, PhD



Jack Dovidio, PhD



Renee Navarro, PharmD, MD



Steven Barnett, MD



Stanley Andrisse, PhD, MBA



Kay Lund, PhD



Irene Avila, PhD,
Exec. Sec.

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Larry Hedges, PhD



Ahna Skop, PhD



John Matsui, PhD



Sandy Merino, PhD



Olivier Noel, PhD



Fatima Rivas, PhD



Sederick Rice, PhD



Roberto Frontera-Suau, PhD



Charisse Nartey, PhD



Pablo Rafael Sacasa, PhD



Ruth Washington, PhD



Augusto Tentori, PhD



Jessi Smith, PhD



Irene Avila, PhD,
Exec. Sec.

Diversity Program Consortium (DPC) Subcommittee

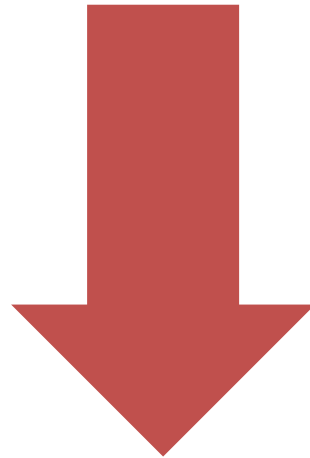
NIH Scientific Workforce Diversity: ACD DWG Updates

Presentation Outline

- 2017 ACD DWG recommendations
 - Next steps for prioritization
- Strategies for institutional culture change
 - Intramural research program pilots as national models
- Diversity Program Consortium
 - Short-term outcomes
 - Phase II funding announcements

NIH Scientific Workforce Diversity

Interventions at Individual Level



Intervention at Institutional Level

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

2017 ACD WGD Recommendations

NIH Institutional Support

Mentoring, Career Development, Recruitment, Retention

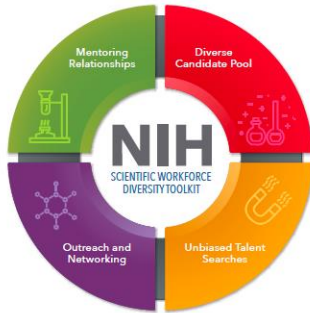
- Institutional partnering for recruitment and retention
 - Diversity metrics
 - Transparency
 - Accountability
 - Institutional best practices
 - Equity
 - Implicit-bias education
 - Climate survey
 - Training grants: Diversity focus
- Transition: independent careers
 - Partnerships
 - Public-private
 - Industry
 - SWD recruitment/retention toolkit
 - Recognize value of teaching: Expand IRACDA
 - Address gaps for other underrepresented groups*

* Collect demographic data: SES, SGM, military veterans, non-traditional students

NIH Scientific Workforce Diversity Interventions

Intramural

- Recruitment Strategies and Tools: NIH SWD Interactive Toolkit



- Retention strategies: NIH Central Equity Committee
- Graduate Student Diversity

Extramural

- BUILD, NRMN, CEC
- Diversity Supplements
- Eliminate R01 funding gaps
 - Next Generation Scientist
 - Peer Review Bias Study
- Sustain and Scale
 - Hubs of Innovation




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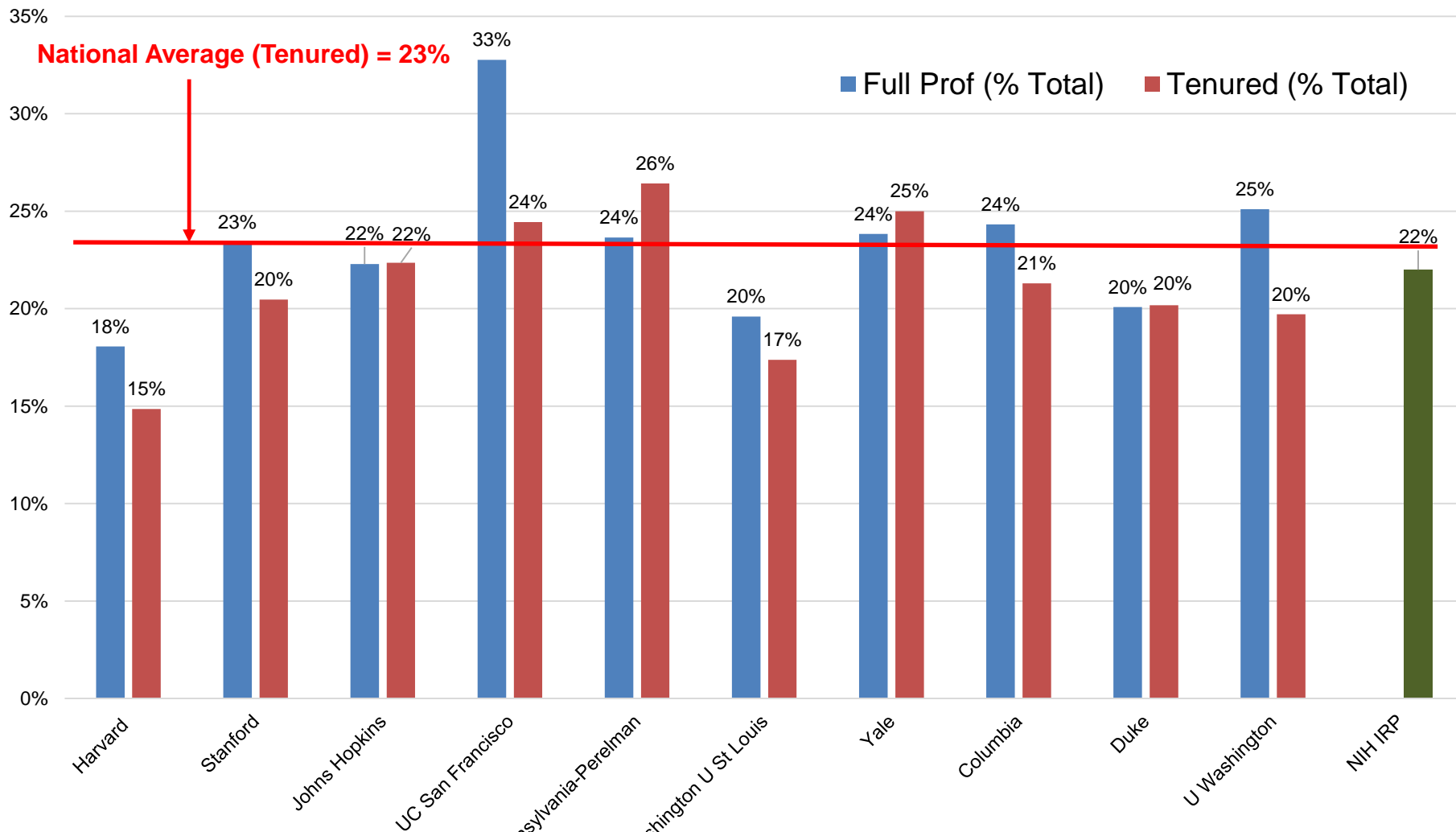
NIH Intramural Tenure Track & Tenured Investigators: End of FY16 (Total 1,052)



| Gender (Tenure-Track & Tenured) | End FY16 | |
|---------------------------------|----------|---------|
| Male | 783 | (74.5%) |
| Female | 269 | (25.5%) |
| Total | 1052 | (100%) |

| Race/Ethnicity (Tenure-Track & Tenured) | End FY16 | |
|---|----------|---------|
| African American | 19 | (1.8%) |
| Hispanic | 39 | (3.7%) |
| Native American | 2 | (0.2%) |
| Asian/Pacific Islander | 194 | (17.9%) |
| White | 798 | (75.2%) |
| Total | 1052 | (100%) |

Top Research Institutions: Women in Senior Academic Rank (2015)



Institutional Culture Change

Institution-focused

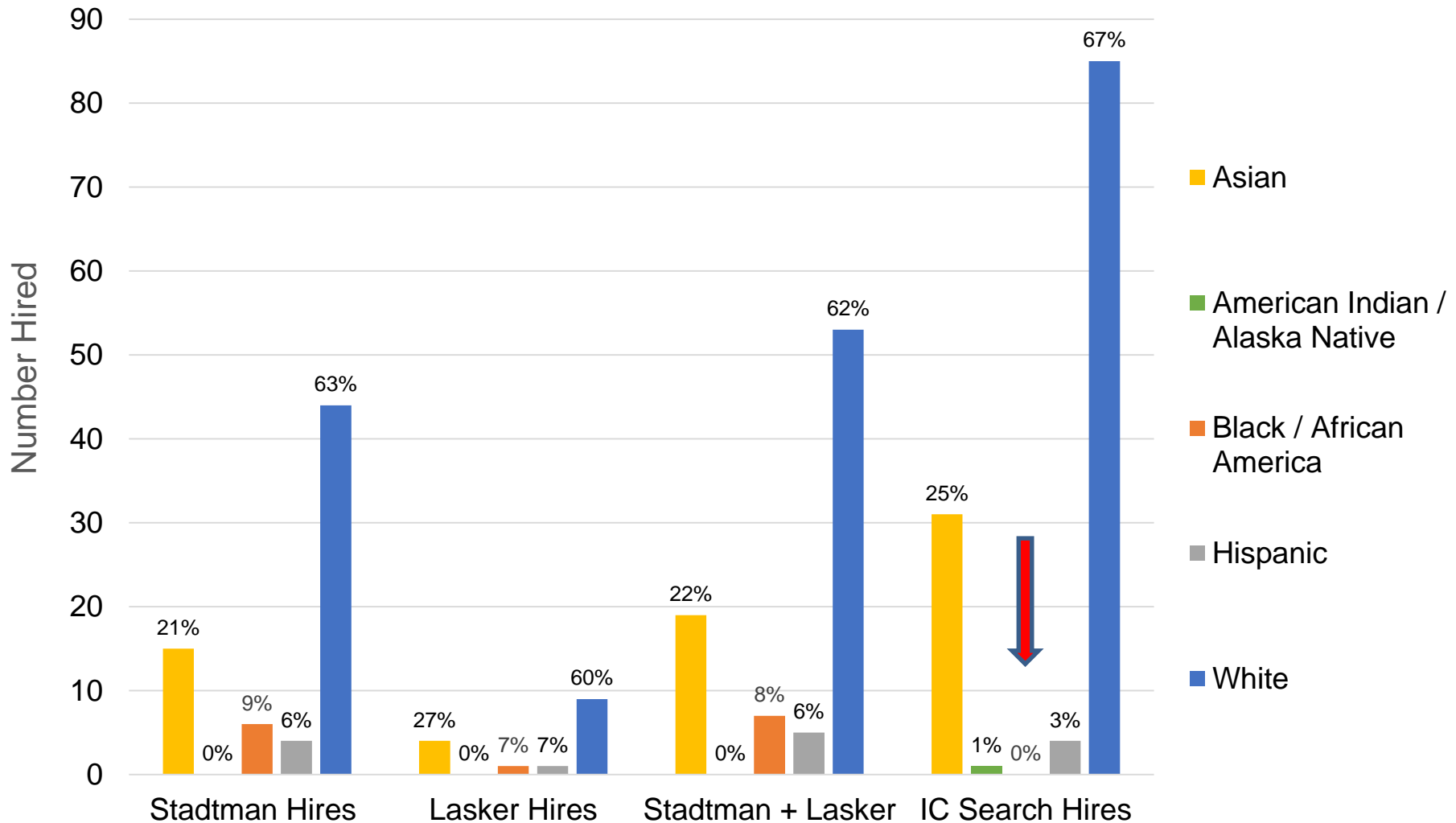
1. Leadership commitment for hiring and promotion
2. Transparency in resources and salary: tracking, reporting, accountability

Individual-focused

1. Provide support, mentoring, coaching, sponsorship
2. Address inclusion and belonging

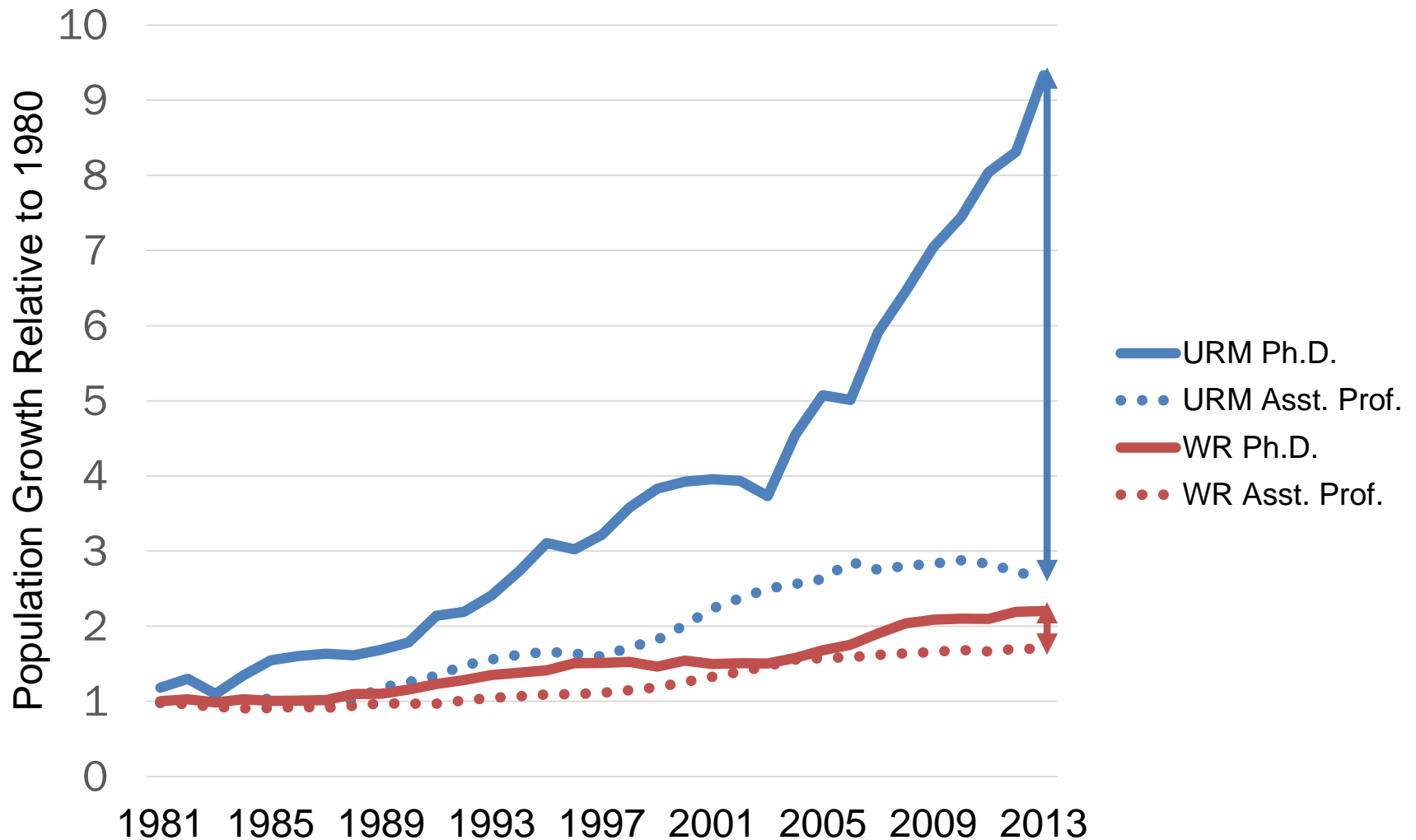
Apply to other underrepresented groups

IRP Hires: Race/Ethnic Underrepresented Groups (2010-2017)



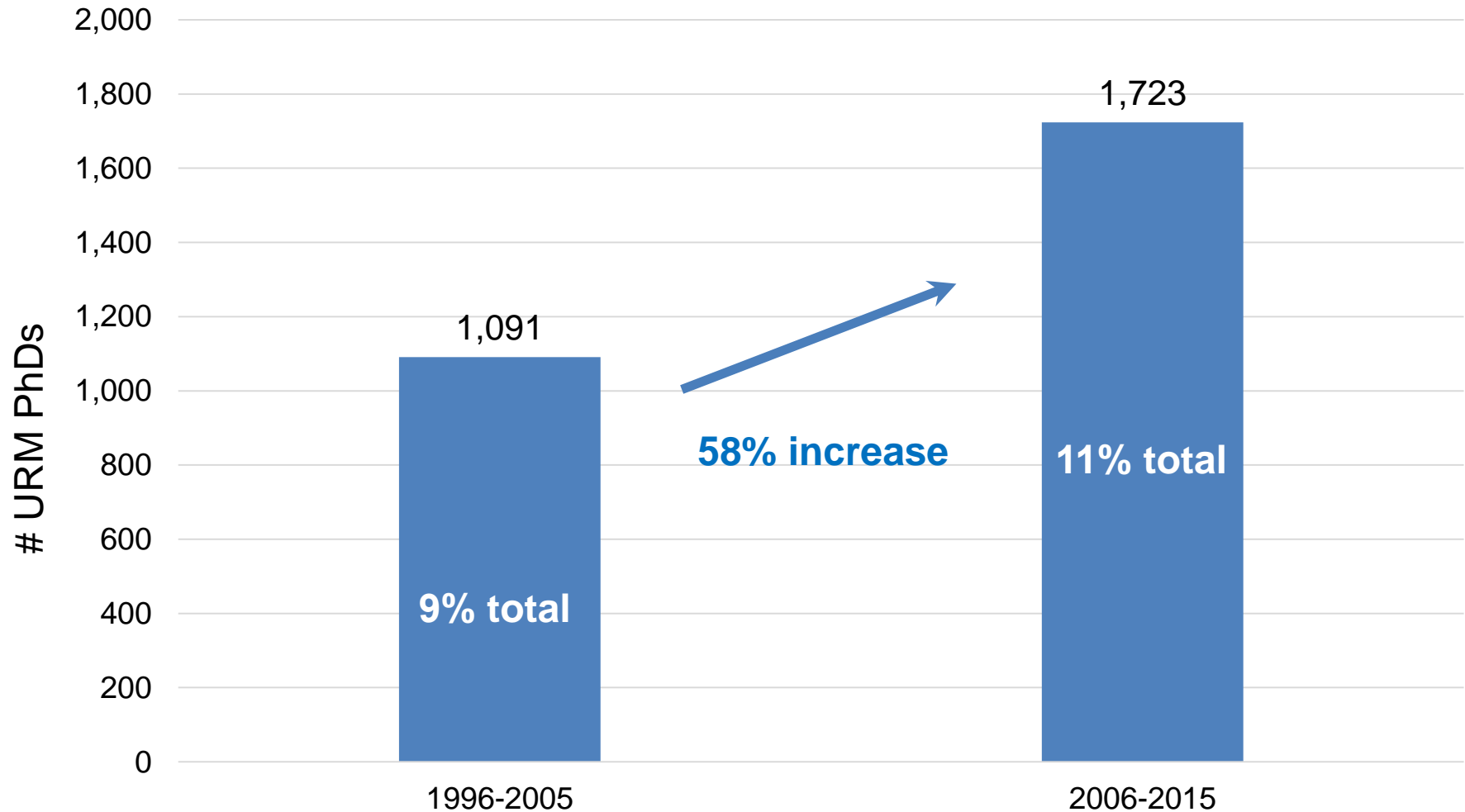
As of Oct. 1, 2017 Source: OIR Database N = 211

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.*

Race/Ethnicity and NIH Funding: Trainees (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%**)

Expanding Diversity of NIH Candidate Pools: Junior Career Stage

Post-Doctoral and Assistant Professors

~ 667 total, top 1/3rd culled

4-10 years post-doctorate (most 4-7)

Authorship in top journals

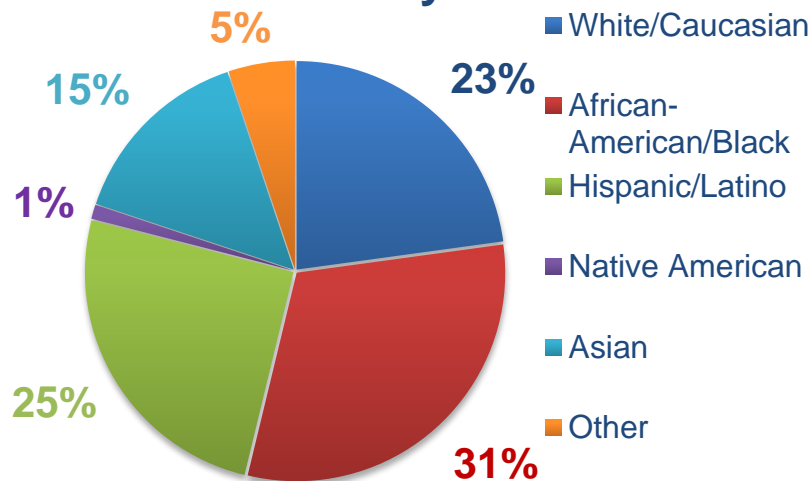
10+ publications: 357

100+ citations: 407

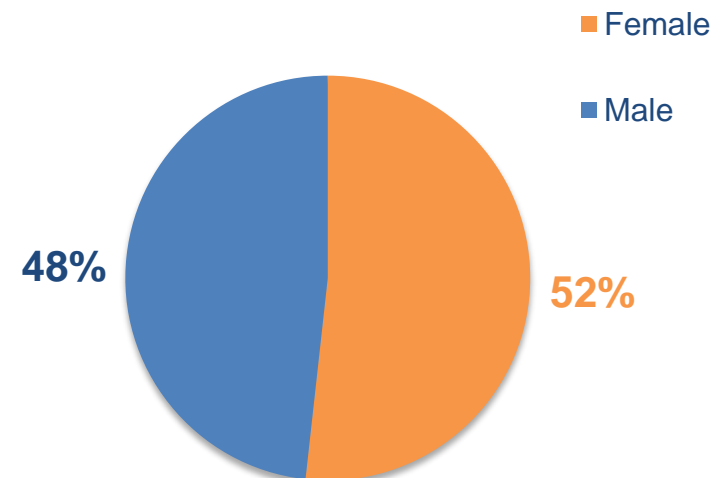
200+ citations: 311



Race/Ethnicity



Gender



Cohort Model for Enhancing Diversity: Tenure-Track Investigators in NIH IRP

- Identify and appoint vetted pool of 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
- Institutional change: Equity, transparency

Translatable to other academic institutions

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NIH Diversity Program Consortium

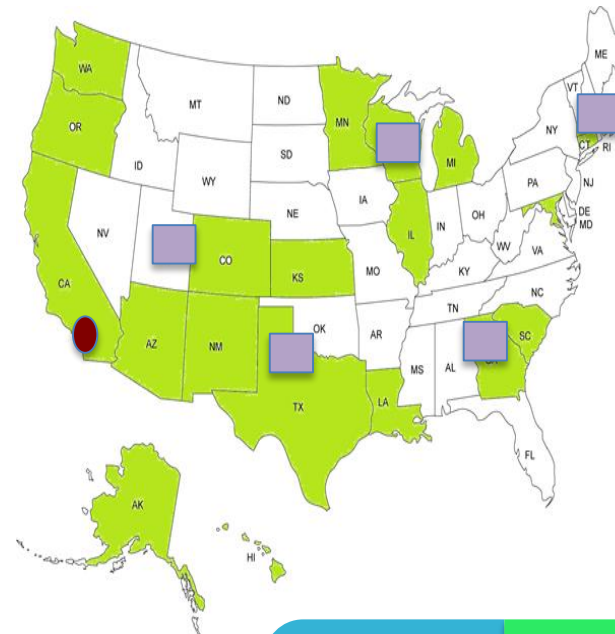
Building Evidence- Awards made October 2014

Total: \$250 million (5 years)

BUILD: 10 sites/experiments

National Research Mentoring Network (NRMN)

Center for Evaluation and Coordination (CEC)



BUILD

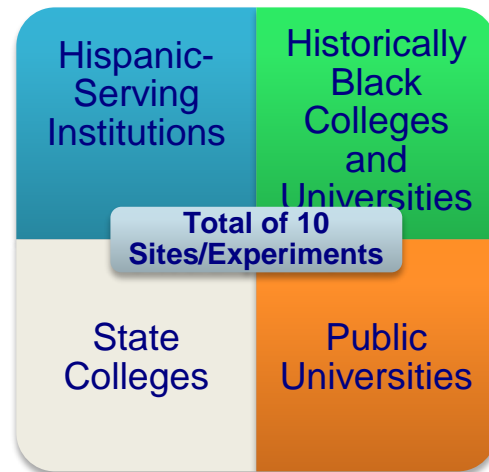
- California State University Long Beach
- California State University Northridge
- Morgan State University
- Portland State University
- San Francisco State University
- University of Alaska Fairbanks
- University of Detroit Mercy
- University of Maryland Baltimore County
- University of Texas El Paso
- Xavier University of Louisiana

NRMN

- Boston College
- Morehouse
- U. Utah
- U. North Texas
- U. Wisconsin

CEC

- University of California Los Angeles



BUILD Dashboard (Years 1-3)

0 200 400 600 800 1000 1200 1400

BUILD NRSA training slots (TL4)*



BUILD research training slots (RL5)



Student Seminars/ Workshops



Student

Faculty Release Time (# participants)



Faculty Mentor Training (# activities)



Faculty

Pilot Projects



Faculty Professional Development (# activities)



Novel Curricula



Institutional Partner Agreements



Institution

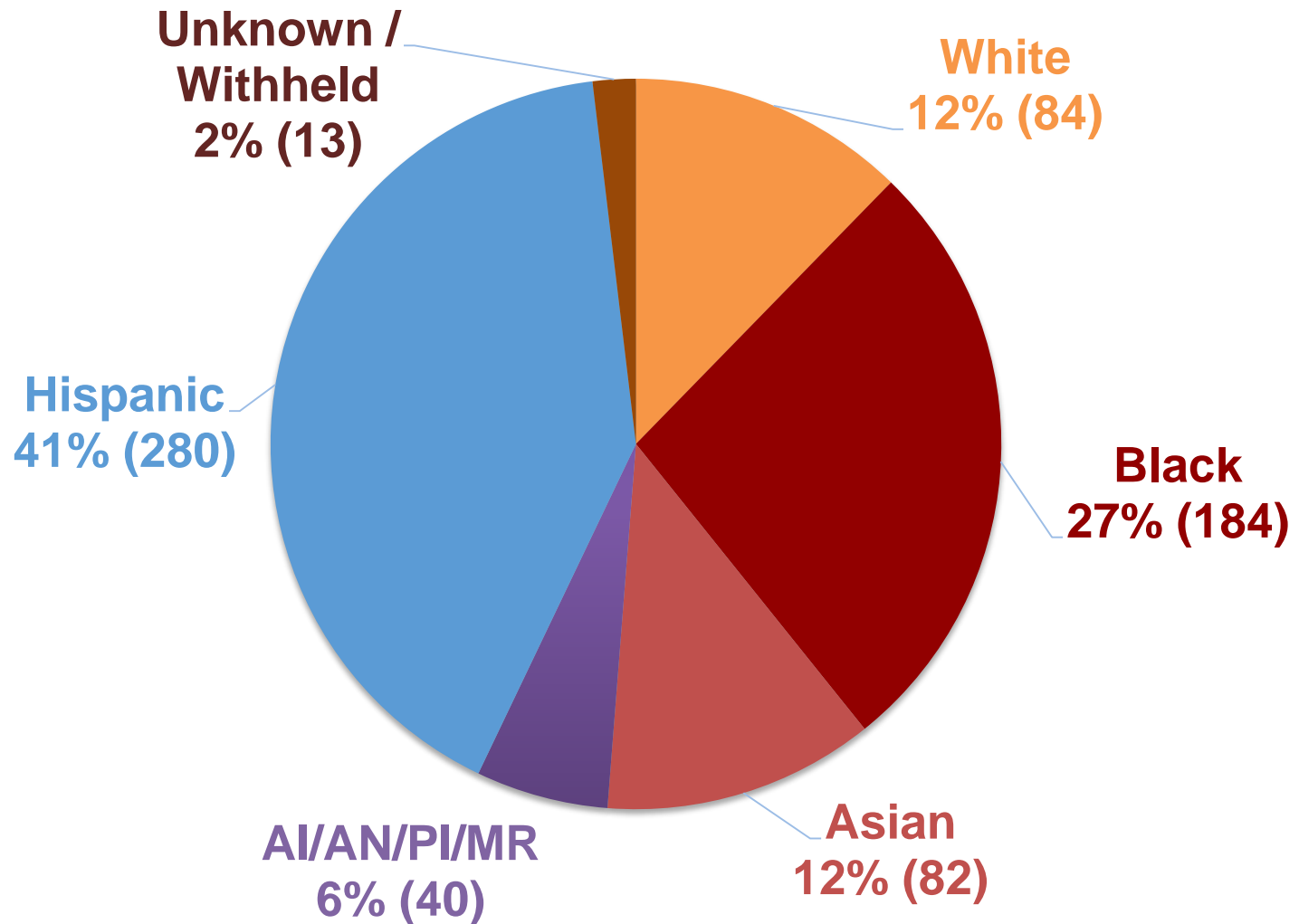
Publications



* Students supported for multiple years

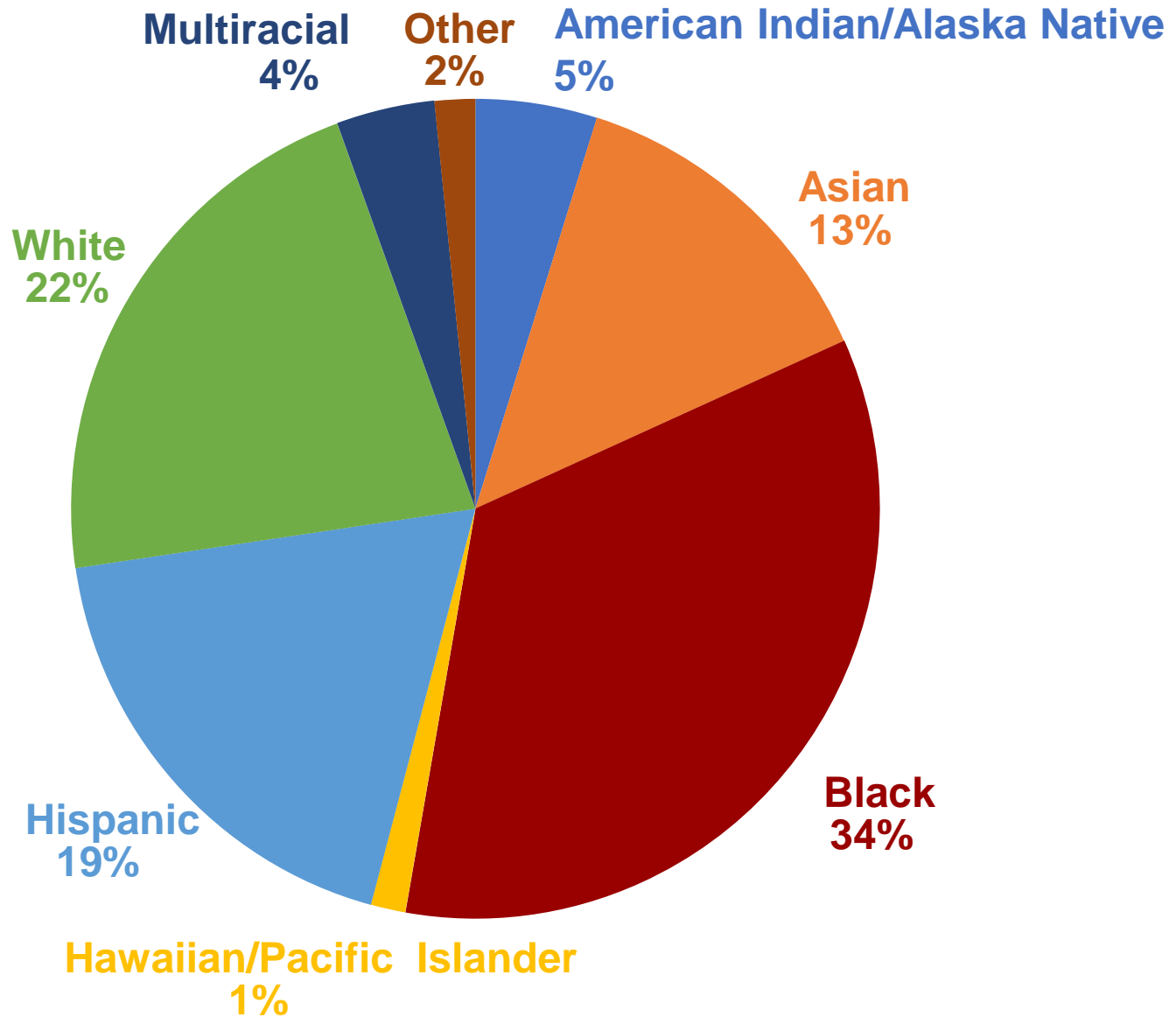
Updated December 2017

BUILD TL4 Participant Demographics (Total:683)



NRMN Grant-Writing Participants

N=432



Matching and Linking



NRMN
Mentoring to Diversify the
Biomedical Workforce

Web Interface NRMN Participants

0 200 400 600 800 1000 1200 1400 1600

MyMentor mentees



MyMentor mentors



MyMentor matches



Grantsmanship matches



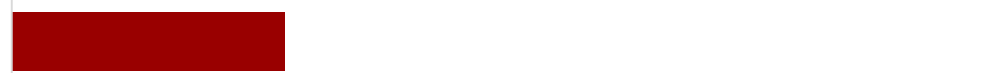
Collaboratory matches



MyNRMN MyConnections



MyNRMN new participants joining MyGroups



MyNRMN new MyGroups formed



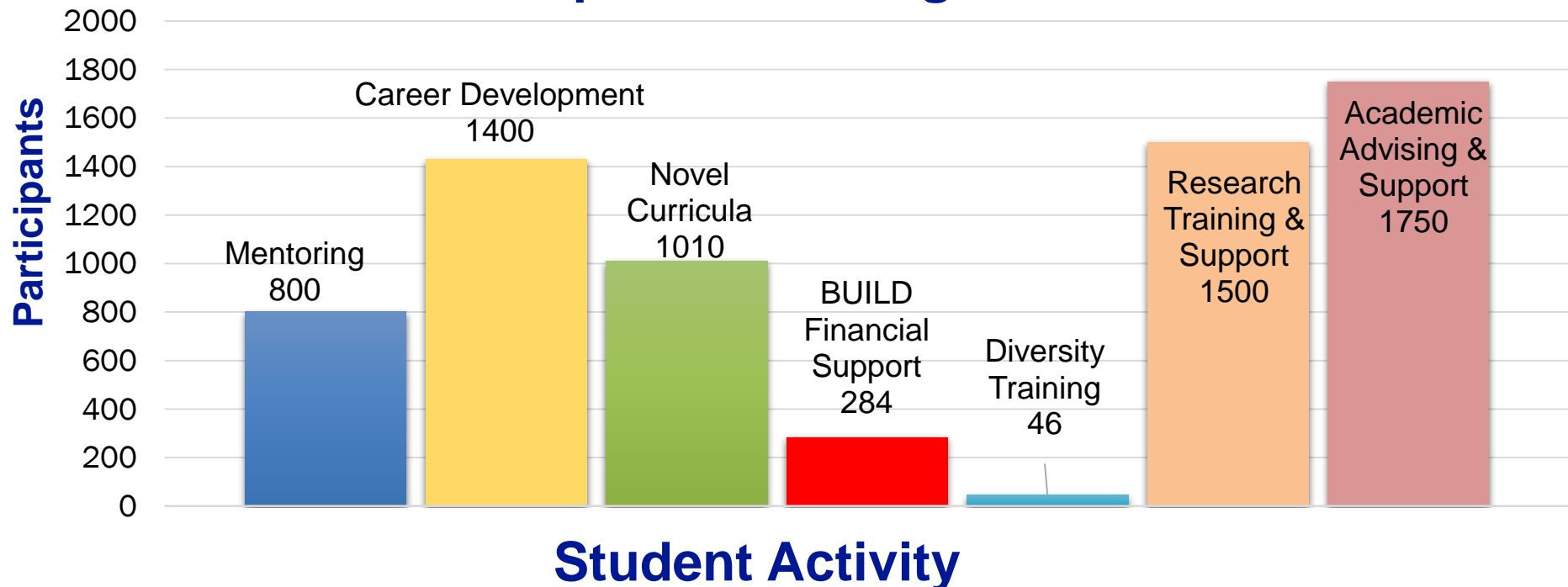
Collaboratory connections



Coordination and Evaluation Center (CEC) Student Activity Tracking Tool

- Individuals tracked by their activities and linked to outcomes
- Data is tracked in the same way
- Stores all data in one location
- Ensures data will be accessible in future years

Example of Tracking Data



BUILD: Testable Interventions

Impact on pre-defined outcomes of:



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Site-Specific

- Reducing stereotype threat
- Diminishing imposter syndrome
- Overcoming microaggressions
- Mitigating unconscious bias
- Increasing cultural awareness and sensitivity
- Emphasizing cultural assets
- Engaging family and support systems

Consortium-Wide

- Science identity
- Providing financial assistance
- Providing authentic research experiences
- Implementing active learning courses
- Forming supportive cohorts and learning communities
- Mentor training
- Creating professional networks

BUILD: “Clinical Trial” Model of Investigation

Independent Variables

Gender
Race/Ethnicity
Disability Status
Socio-economic Status
Institutional Factors
Test Scores
Major
GPA

Activities or Interventions

Financial Support
Academic Advising & Support
Research Training & Support
Novel Curricula
Mentoring
Diversity Training
Career Development

Short to Medium-Term Outcomes

Engagement in Research

Enhanced
Self-Efficacy & Science Identity

Pursuit & Persistence in
Biomedical Science Disciplines

Scientific Presentations and
Authorship of Manuscripts

Social Integration

Satisfaction with Faculty
Mentorship

Intent to Pursue Biomedical
Research Career

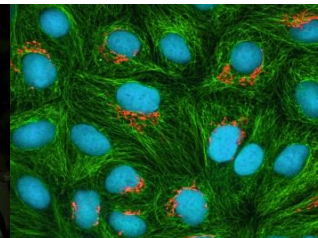
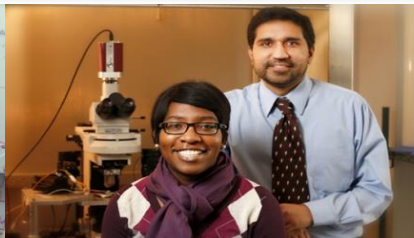
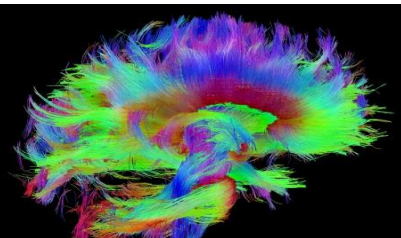
Medium to Long-Term Outcomes

Completion of Undergraduate
Degree in Biomedical Science

Evidence of Biomedical Career
Preparedness

Application & Acceptance to
Graduate Programs

Research Fellowships &
Scholarships

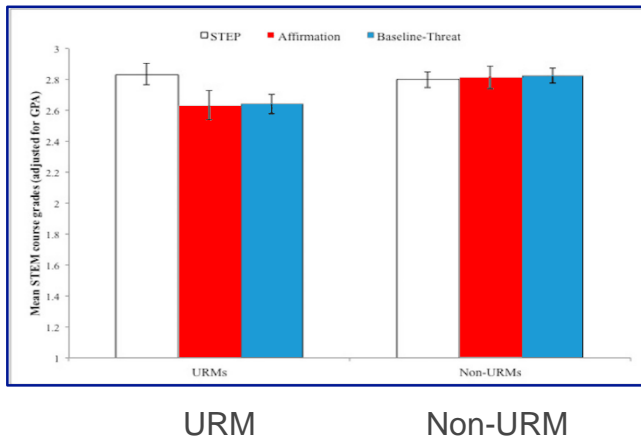


SF State University

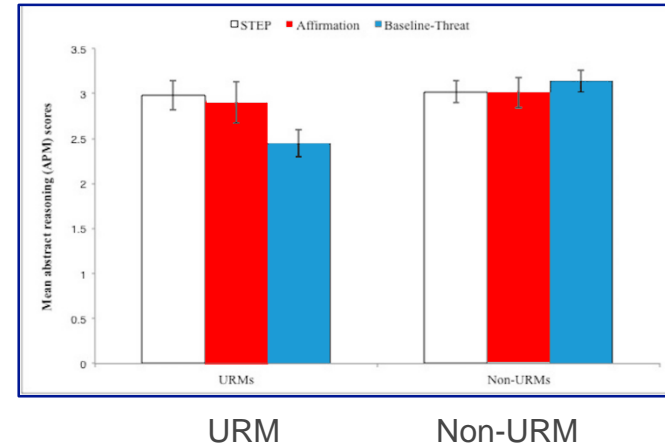
Stereotype Threat Intervention

STEP Intervention: Addressing stereotype threat, affirming underrepresented students' values, improving sense of belonging, and building science identity

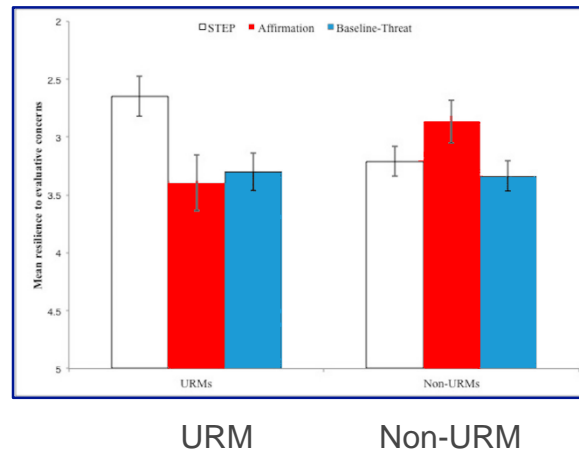
Course Grades



Abstract Reasoning



- Baseline Threat
- Values Affirmation
- STEP



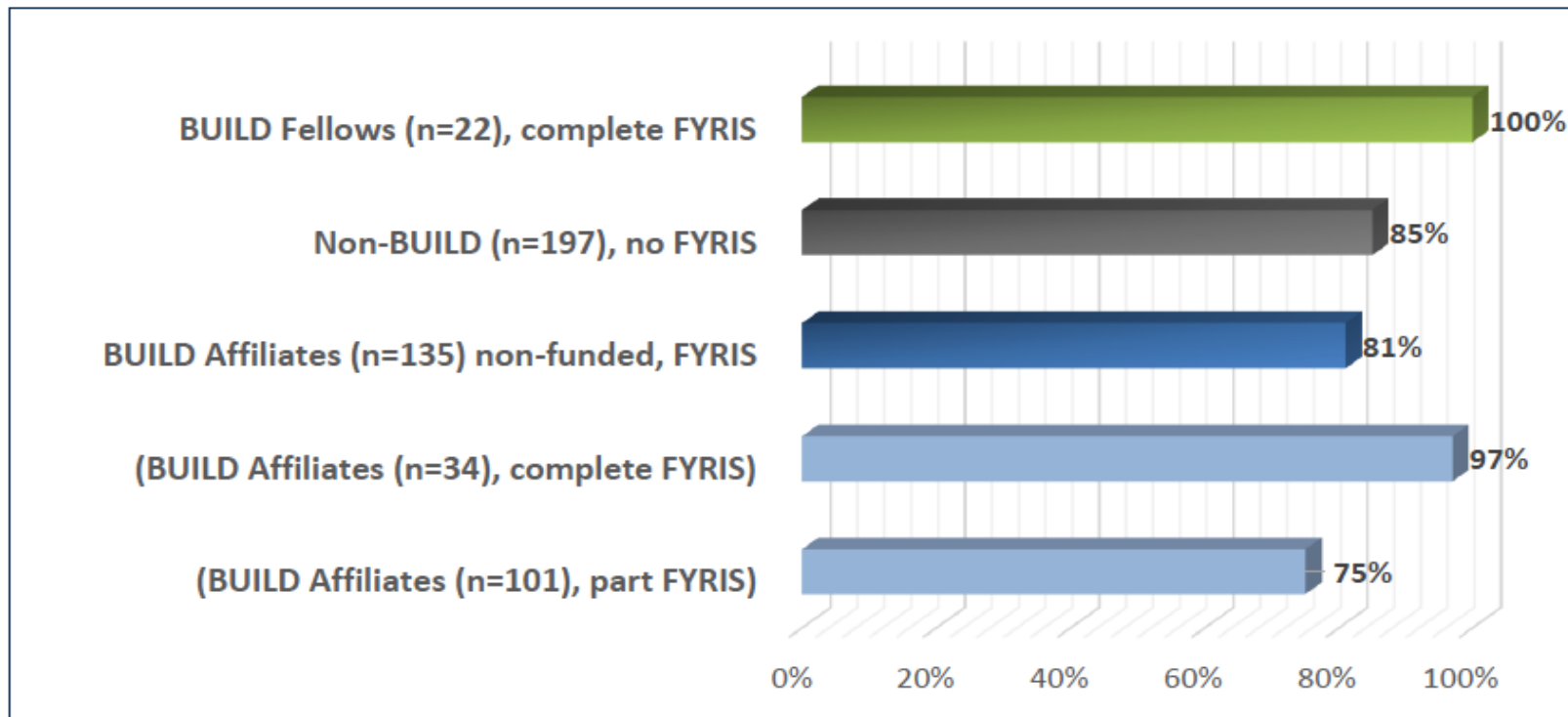
Resilience

University of Texas, El Paso



Intervention:

- Freshman Year Research Intensive Sequence (FYRIS)
- Foundation course (1) + Research skills course (2)
- Retention after 1 year (%)



BUILD Fellows: Financial support; **BUILD Affiliates:** participate - no scholarship

Non-BUILD: Control: Entering freshmen - same majors, not participating in BUILD

DPC Phase II



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Building Infrastructure Leading to Diversity (BUILD) (NOT-RM-18-005)

- Limited competition – to allow meritorious sites to complete the BUILD experiments
- Focus on site-specific and consortium-wide experiments
- Emphasize sustainability and dissemination

Center for Evaluation and Coordination (CEC) (NOT-RM-18-006)

- Limited competition - allows for uninterrupted data collection
 - Review: Strengths and weaknesses of current center
 - Improvements and course corrections
 - Emphasize sustainability and dissemination

DPC Phase II



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NEW - DPC Dissemination and Translation Awards (DPC DaTA) (NOT-RM-18-007)

- Open competition: increase DPC national impact
 - Training or Mentoring Interventions (U01)
 - Research Administration Capacity Building (U01)
- Focus: implement sustainable intervention
- Collect data using DPC methods
- Collaborate with funded BUILD or NRMN site; and CEC
- Institutional requirements are the same as for BUILD
 - <\$7.5 M RPG; 25% Pell eligible

DPC Phase II



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National Research Mentoring Network (NRMN)

- Open competition
 - New ideas on science of mentoring and networking
 - Enhance efficiency of administrative structure
 - Move from U54 to: a U01 and two U24s
- The science of mentoring and networking (U01)
 - Science of Mentorship
 - Professional Networking
 - Navigating Critical Career Transition Points
- Coordination and Outreach Center (U24)
- Resource Center (U24)
 - Mentoring & Networking Core

Great minds think
differently ...

@NIH_COSWD 



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