



Workforce Diversity Action Agenda Progress Report

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National Advisory Council for Human Genome Research

Vence Bonham, Jr., JD
Acting Deputy Director

**Building a Diverse
Genomics Workforce:
An NHGRI Action Agenda**

The **Forefront
of Genomics**



Progress Report

- January 2021 NHGRI Established the ‘Building a Diverse Genomic Workforce: Action Agenda’
- Two Year Progress Report
- Looking Forward to Continue to Implementing the Action Agenda
- Reaching Our Goals Requires Partnerships
- Not a Sprint, but a Marathon

genome.gov/workforcediversity

NHGRI Action

- TiDHE Office established in the NHGRI Office of the Director April 2021
- Recruited 7 staff to move Action Agenda forward in collaboration with others at NHGRI
- Coordination of NHGRI Training Programs with NHGRI Workforce Diversity Programs
- Develop and support new initiatives to advance genomic health equity and conduct health disparities research
- Working with other Institutes, Professional Societies, Industry to enhance the diversity of genomic workforce



Building a Diverse Genomics Workforce

GOAL 1:



Develop and support initiatives that provide early exposure and access to careers in genomics.



OBJECTIVES

As the U.S. education system becomes more diverse, we must invest in steps to ensure that some part of the genomic workforce. Pursuing a career in genomics usually entails

1.1: Identify best practices in programming designed to provide **early exposure to genomics**, including barriers and recommendations to eliminate those barriers

1.2: Support and participate in programs that are designed to **encourage individuals of diverse backgrounds** to pursue genomics careers, especially for persons from groups who are **historically underrepresented in science**

GOAL 1:



Develop and support initiatives that provide early exposure and access to careers in genomics.

Public Programs:

- Smithsonian National Museum of African American History and Culture (NMAAHC) Program Series

Extramural Programs:

- The NIH Science Education Partnership Award (SEPA)
- Genomic Data Science Community Network (GDSCN)

Building a Diverse Genomics Workforce

GOAL 2:



Develop and support training programs and networks that connect undergraduate and graduate education to careers in genomics.



OBJECTIVES

2.1: Create a **systematic network of support for students from diverse backgrounds**, including those from underrepresented groups, as they move to and through graduate training programs in genomics

2.2: Ensure that **undergraduate minority-serving institutions (MSI) and community colleges** are aware of and tightly connected to this network

2.3: Encourage **inclusive climates at all leading graduate-level genomics training programs** so as to mentor and promote cohorts of individuals from diverse background, including underrepresented groups

GOAL 2:



Develop and support training programs and networks that connect undergraduate and graduate education to careers in genomics.

Public Programs:

- ASHG Human Genome Scholars Initiative (HGSI) Program

Intramural Programs:

- Immersive Summer Program for Research in Genomics (iSPRinG)

Extramural Programs:

- NHGRI Predoctoral to Postdoctoral Transition Award for a Diverse Genomics Workforce
- Educational Hub for Enhancing Diversity in Computational Genomics and Data Science
- Genome Research Experiences to Attract Talented Undergraduates into the Genomics Field to Enhance Diversity (GREAT) Program
- NHGRI Diversity Supplement Program
- (COSWD) Administrative Supplement Program to Recognize Excellence in Diversity, Equity, Inclusion and Accessibility (DEIA) Mentorship

Diversity Centers for Genome Research

	U54	UG3/UH3
Diversity Centers for Genome Research FOAs	RFA-HG-22-026*	RFA-HG-22-027*

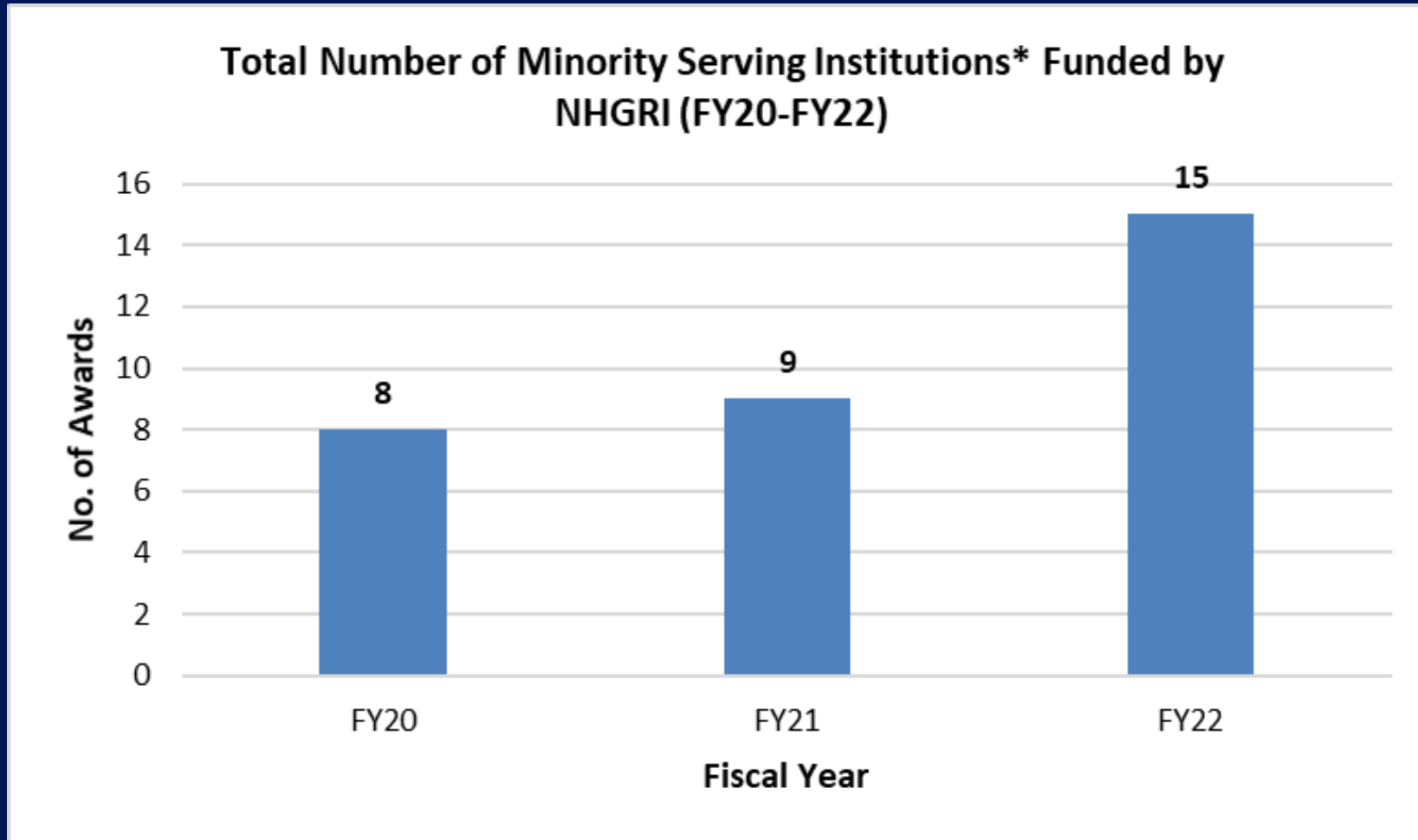
Goals and Objectives

- Enhance diversity in genomics research by establishing Centers at MSIs to carry out innovative, state-of-the-art genomic research studies
- Foster genomic research career development
- Improve genomic infrastructure in addition to computational, analytical and ELSI research capabilities
- Establish sustainable partnerships and disseminate resources and findings

* Next receipt date: June 23, 2023 8

NHGRI Funded Minority Serving Institutions, FY20-FY22

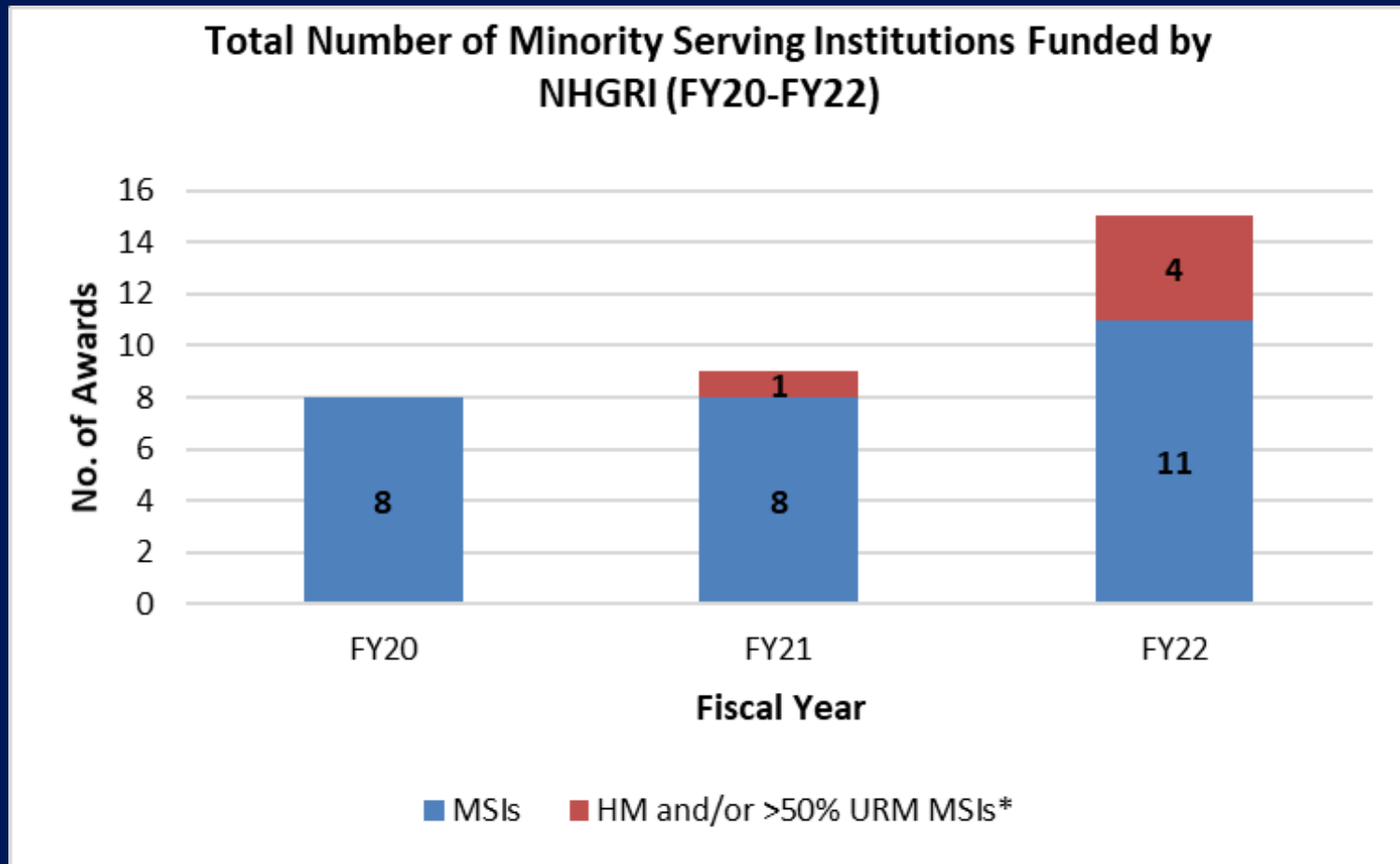
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* Department of Education designations for Minority Serving Institutions

NHGRI Funded Minority Serving Institutions, FY20-FY22

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* MSIs with a documented **historical and current mission** to educate students from underrepresented populations and/or have a student population of **more than 50% from underrepresented populations**

Building a Diverse Genomics Workforce

GOAL 3:



Develop and support training, career development, and research transition programs that lead to independent research and clinical careers in genomics.



The transition from formal education to research and clinical careers in genomics often requires overcoming barriers to become an established professional in the field. The retention of trained professionals who specialize in genetics and genomics is a major challenge despite the exciting scientific and health-related possibilities. Identifying key training and developing intervention programs are first steps in achieving a more diverse genomics workforce.

OBJECTIVES

3.1: Identify and reduce barriers for individual from diverse backgrounds who want to enter research and clinical careers in genomics

3.2: Facilitate the inclusion and retention of individuals from diverse backgrounds in research and clinical careers in genomics

GOAL 3:



Develop and support training, career development, and research transition programs that lead to independent research and clinical careers in genomics.

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Intramural Programs:

- Postdoctoral Fellowship Program in Genomic Science and Health Equity (NHGRI/FDA Fellowship)
- Future Leaders Advancing Genomic Sciences in Health Innovation Postdoctoral (FLAGSHIP) Program

Extramural Programs:

- New Investigators to Promote Workforce Diversity in Genomics, Bioinformatics, or Bioengineering and Biomedical Imaging Research (R01)
- NHGRI Predoctoral to Postdoctoral Transition Award for a Diverse Genomics Workforce (F99/K00)

Building a Diverse Genomics Workforce

GOAL 4:



Evaluate progress towards achieving greater diversity in the genomics workforce.



OBJECTIVES

in enhancing the diversity of the genomics workforce. Going forward, it will be important to evaluate the effectiveness of these programs and to identify areas for improvement. Regular assessments in this area to determine their effectiveness and, in turn, to guide changes and improvements.

- 4.1:** Establish a relevant set of metrics for evaluating NHGRI diversity training and career development programs
- 4.2:** Use these metrics to develop tracking protocols for all individuals supported by these training programs
- 4.3:** Assess all NHGRI and career development programs, including diversity-targeted programs, with periodic reports to leadership

GOAL 4:



Evaluate progress towards achieving greater diversity in the genomics workforce.

- Human Genetics & Genomics Workforce Survey Report
- Development of Toolkit to Support Evaluation of Training Programs and Tracking System for Trainees

Engagement

- Minority-Serving Institutions
- Genetics and Genomics Professional Societies
- Biomedical and Pharmaceutical Representatives
- NIH Institutes, Centers, and Offices
- COSWD and UNITE
- Trainees and Early-Stage Investigators
- Government Agencies (i.e., Smithsonian, FDA)
- Public

Acknowledgements

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 - Jamil Scott

NIH announces UNITE Initiative



NHGRI Diversity R01 (RFA-HG-21-041) released



GREAT R25 (RFA-HG-22-004) released

Genomic Science and Health Equity postdoctoral fellowship program launched

TiDHE Office announced



Educational Hub for Enhancing Diversity in Computational Genomics and Data Science released RFA-22-002

Diversity Centers for Genome Research RFAs released RFA-HG-22-026, RFA-22-027

2021

2022



Diversity Action Agenda and AJHG Commentary released



Genomic Data Science Community Network (GDSCN) launches



Industry Roundtables on Workforce Diversity



New IRP Summer Internship (iSPRinG) launches

Health equity in genomics workshop

Nominations open for the Outstanding Award for Enhancing DEIA in the Genomics Workforce

HBCU, HSI Roundtables

Human Genetics and Genomics Workforce Survey released

Questions