Enhancing the Diversity of the Genomics and Biomedical Workforce

Foundation for the National Institutes of Health

A CRITICAL WORKFORCE NEED

Today's genomics workforce does not reflect the diversity of the U.S. population. Data show that enhancing the diversity of scientific teams produces better ideas and more creativity. Dr. Eric Green, Director of the National Human Genome Research Institute (NHGRI), noted:

> The promise of genomics cannot be fully achieved without successfully attracting, developing, and retaining a diverse workforce that includes people from groups currently underrepresented in the genomics enterprise.

NHGRI has made this an "action agenda" and is committed to meaningfully enhancing the diversity of the genomics workforce by 2030. Developing teams of individuals from diverse backgrounds, however, means recognizing that some groups are underrepresented in the biomedical workforce. These groups include individuals from underrepresented racial and ethnic groups, individuals with disabilities, and individuals from disadvantaged backgrounds.

PROJECT OBJECTIVES

- **Provide exposure to genomics and biomedical research to students underrepresented in these fields**
- **Democratize genomics education and bring science experiences to students and people of all abilities who may otherwise not have resources or access to the subject matter**

Students who decide to pursue a career in genomics usually have been introduced to science, technology, engineering, and mathematics (STEM) early in their academic careers. Waiting until students reach post-secondary education to introduce them to genomics is often too late, especially for students with limited access to educational resources. The proposed programs will invest in students as early as high school to ensure they have opportunities to become part of the genomics workforce and are introduced to training and networks that help students successfully prepare for careers in genomics.

PROJECT AIMS

The proposed initiative between NHGRI, the Foundation for the National Institutes of Health (FNIH), and private sector partners includes two new collaborative programs designed to enhance diversity in the genomics workforce:

1. A career exploratory summer program for students to enhance opportunities in genomics and biomedical research, and
2. A mobile genomics lab to bring educational opportunities to students across the country

hese programs intend to pro ide exposure to students ho are underrepresented in genomic and biomedical research, as defined by the ational cience oundation, and ho aspire to leadership positions in the biomedical and genomics or force

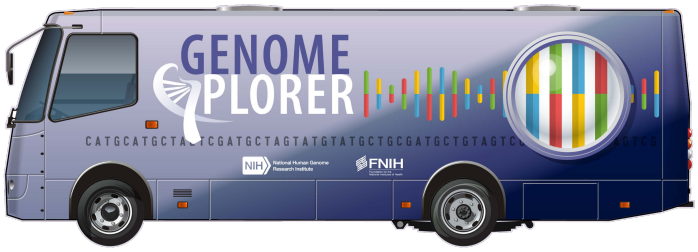
STUDENT SUMMER PROGRAM

This **six-week career exploratory summer program** allows students of varied backgrounds to envision themselves as future leaders in the fast-growing, high-impact world of genomics. Students will receive instruction to help them prepare to tackle complex scientific subjects in post-secondary education, and mentors from both NHGRI and industry partners to provide additional support through virtual and in-person guidance.

The program will be set up in **five geographic areas of the United States**, with each location serving up to 20 students, or approximately 100 students annually. Each geographic location will be supported by partnerships with academic institutions with a demonstrated commitment to, or historical track record of, training, recruiting, and retaining students from underrepresented populations. NHGRI and industry partners will provide staff time and other in-kind contributions.

MOBILE GENOMICS LAB

Access to genomics education should not be limited to students attending schools with the most-resourced science classrooms or for families who live within driving distance of state-of-the-art science centers, museums, and community forums. A Mobile Genomics Lab would **democratize genomics education and bring science experiences to students and people of all abilities who may otherwise not have resources or access to the subject matter**. From rural communities in Maine to tribal communities in Oklahoma to underserved communities in Georgia, the mobile lab could bring a hands-on genomics lab experience to thousands of students across the country.



The mobile lab, designed to be accessible to people of all abilities, will provide a physical space with appropriate wet-lab equipment to carry out experiments like real-time DNA sequencing, as well as the ability to conduct genomic data science and learn bioinformatics using NHGRI's accessible cloud computing capabilities. This has the potential for large-scale outreach and engagement, with **partnerships with middle schools, high schools, women's colleges, and minority-serving institutions** providing additional opportunity for educators to work with their students in the mobile lab.

OPPORTUNITIES FOR INVOLVEMENT

The FNIH is actively seeking private-sector participation to support summer program sites and the mobile genomics lab over a 5-year period. Funding partners will have the ability to brand components of the program. Partners will help develop educational and programmatic materials, receive regular updates on the program's progress, and participate in annual meetings for the project. Project participants will also receive broad acknowledgment for being a scientific and funding partner. The FNIH aims to secure funding commitments and launch the project in Q4 2024, with the first summer program cohort beginning in June 2025.

5-Year Program Funding Needs	
	Mobile Genomics Lab: $5M
	Summer Student Program: $800K/site

To learn more about becoming a scientific and funding partner, please contact:

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