Diversity and Bias: Perceptions and Reality

Eric W. Padmore, MHSA (Moderator)
Ericka Boone, PhD
Stephanie Fertig, MBA
Charlene Le Fauve, PhD
Diversity and Bias: Perceptions and Reality

Eric Padmore, MHSA
Senior Policy Advisor

Stephanie Fertig, MBA
HHS Small Business Program Lead

SEED (Small business Education & Entrepreneurial Development)
Office of the Director | Office of Extramural Research | National Institutes of Health
UPDATED WEBSITE COMING MAY 2021

NIH SBIR/STTR Website

Information for NIH Applicants and Recipients
Small Business Relief Options and Resources (SBA)

Resources for Women-Owned and Socially Disadvantaged Businesses (WOSDB)

Our goal is to diversify the SBIR Community by engaging and supporting unique demographics. Resources range from application assistance to grant supplements to hire women and minorities.

More Details

What are SBIR and STTR Programs?
The Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs, also known as America’s Seed Fund, are one of the largest sources of early-stage capital for technology.
• The goals of the Small Business Programs are to:
  – Stimulate technological innovation
  – Meet federal research and development needs
  – Increase participation by women-owned and socially and economically disadvantaged small businesses
  – Increase private sector commercialization of innovations developed through federal research and development funding
What is a **Women-Owned Small Business** (WOSB)?

- A firm must be at least 51% owned and controlled by one or more women, and primarily managed by one or more women.
- The firm must be “small” in its primary industry in accordance with SBA’s [size standards](#) for that industry.
- SBCs self-certify on the SF 424 (R&R) Form.

What is a **Socially and Economically Disadvantaged Business** (SDB)?

- The firm must be 51% or more owned and control by one or more disadvantaged persons.
- The disadvantaged person or persons must be socially disadvantaged and economically disadvantaged.
- The firm must be small, according to SBA’s [size standards](#).
- You must self-certify by registering your business in the [System for Award Management](#).
The NIH commissioned a survey of woman-owned and socially and economically disadvantaged small businesses to gain insight into the best ways to reach them and increase their participation in the NIH SBIR/STTR program.
Have you ever considered applying for an NIH SBIR/STTR grant or contract?

<table>
<thead>
<tr>
<th>Responses</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>226 90%</td>
</tr>
<tr>
<td><em>Have applied</em></td>
<td>112 45%</td>
</tr>
<tr>
<td><em>Never applied</em></td>
<td>114 45%</td>
</tr>
<tr>
<td>No</td>
<td>25 10%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>251</strong></td>
</tr>
</tbody>
</table>

Is there a specific reason you decided not to apply?

- Little chance of success
- Feel that funding is already earmarked for specific groups
- Concerns with fairness of review
- Concerns with intellectual property
- Unaware/Lack of information
- Too early in development
Small Business Success Stories

The NIH is actively turning discovery into health by helping small businesses develop innovative technologies that improve health and save lives.

<table>
<thead>
<tr>
<th>Company</th>
<th>Story</th>
<th>State - District</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cell Podium, LLC</td>
<td>Video Messages Sent Directly to Cell Phones Improve Public Health During Crises</td>
<td>NJ - 6</td>
</tr>
<tr>
<td>Advanced Circulatory Systems</td>
<td>A Life-Threatening Experience Inspires Enhanced CPR</td>
<td>MN - 4</td>
</tr>
<tr>
<td>Cognition Therapeutics</td>
<td>Alzheimer's Drug Shows Progress in Restoring Cognitive Function</td>
<td>PA - 18</td>
</tr>
</tbody>
</table>

Digital Learning Company Supports Parents, Teachers, and Underserved Communities

Latina-Owned Business Creates Effective Public Health Campaigns

sbir.nih.gov/stories
Entrepreneurial Workforce Diversity Working Group

Working Group Launched
August 24th, 2020

50+ staff meeting bi-monthly

Develop strategies to increase participation of under-represented groups in the product development ecosystem (academic and small business)

20 Success Stories (and counting!)

Company Ownership
- Woman Owned
- Minority Owned

NIH SEED
2021 HHS Small Business Program Conference
Diverse Perspectives SEEDing Impactful Innovations
NOT-OD-19-088

• NIH no longer collects Women-Owned and Socially or Economically Disadvantaged Business information on the Application Forms
• Business status is longer visible to peer reviewers – minimizing potential for bias during peer review
• Portfolio-level analysis utilizes information about “Business Type” retrieved from the System for Award Management (SAM)

• Benefits:
  – Reduces applicant burden
  – Improves data quality and consistency
  – Minimizes the potential for bias during peer review
Approximately 1/3 of Small Business Applications and Awards are from Women-Owned or Socially/ Economically Disadvantaged Businesses

Applications (6231 total)

- All Women-Owned Business: 15%
- All Socially/Economically Disadvantaged Business: 25%
- Applications: 66%
- All Women-Owned Business: 13%
- All Socially/Economically Disadvantaged Business: 20%

Awarded Projects (868 total)

- All Women-Owned Business: 13%
- All Socially/Economically Disadvantaged Business: 20%
- Awarded Projects: 71%

*Competitive “new” projects*
Representation of women-owned and socially and economically disadvantaged business in the NIH portfolio is consistent with their overall representation in industry

<table>
<thead>
<tr>
<th>NAICS</th>
<th>Description</th>
<th>Women-Owned</th>
<th>Minority-Owned</th>
</tr>
</thead>
<tbody>
<tr>
<td>541714</td>
<td>R&amp;D in Biotechnology</td>
<td>14%</td>
<td>20%</td>
</tr>
<tr>
<td>541715</td>
<td>R&amp;D in the Physical, Engineering and Life Sciences</td>
<td>14%</td>
<td>16%</td>
</tr>
<tr>
<td>541511</td>
<td>Custom Computer Programming Services</td>
<td>14%</td>
<td>27%</td>
</tr>
<tr>
<td>334516</td>
<td>Analytical Laboratory Instrument Manufacturing</td>
<td>5%</td>
<td>6%</td>
</tr>
<tr>
<td>334510</td>
<td>Electromedical and Electrotherapeutic Apparatus Manufacturing</td>
<td>7%</td>
<td>8%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>14%</strong></td>
<td><strong>25%</strong></td>
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Top 5 Industry Codes for HHS as identified by the National Women’s Council Report, data from the 2017 Annual Business Survey
Fiscal Year 2020 Program Statistics

Very Competitive- only 14% of new projects are funded and first submissions have a lower success rate (11%)
…BUT resubmissions have a higher success rate (18%)

New Companies or Investigators are funded at a lower rate (10-11%)
….BUT we do support new Investigators and Companies
• 25% of awards are to Investigators that are new to SBIR and STTR
• 20% of awards are to new Companies

Most Companies Must Resubmit
Persistence is Key
PA-18-837
Administrative Supplement to Promote Diversity in Research and Development Small Businesses

Purpose: Improve the diversity of the research workforce
- Small Businesses with active small business awards (SBIR/STTR)
- Recruit and support individuals from underrepresented groups in health-related research

Career Level:
- Undergraduate
- Graduate
- Degree Holders
- Postdoctoral
- Developing Independent Career

Amount:
$5,000-100,000*
*Depending on candidate career level

37 Awards to Date

Rolling Deadline
NIH’s Approach to Inclusive Excellence

Diversity and Bias: Perceptions and Reality Panel
April 26, 2021

Charlene E. Le Fauve, Ph.D.
Senior Advisor to the Chief Officer for Scientific Workforce Diversity
1. SWD Overview: Why Does Diversity Matter?

2. Initiatives to Address Diversity and Inclusion
   a. Small business administrative supplements to promote scientific workforce diversity
   b. Assessing barriers to recruitment and retention
   c. Workforce implicit bias training
   d. NIH Diversity Program Consortium (DPC)
   e. Evidence-based resources and tools
Why Does Diversity Matter?
Stronger Performance

Research shows diversity and inclusion leads to a more positive individual, team, and organizational performance across various contexts.

Fact-Based Decision-Making
• Members of racially diverse mock jury panels exchanged more information, cited more facts, and made fewer errors.¹

Preparation and Perspective-Taking
• Socially diverse contexts increase individuals’ preparation, in anticipation of perspective differences, leading to better performance.²

Information Diligence
• Ethnically diverse markets reduce traders’ pricing errors, showing how social context influences decision-making and how diversity enhances information deliberation.³

Why Does Diversity Matter?
Business and Technological Innovation

Teams that include different kinds of thinkers outperform homogenous groups on complex tasks, producing diversity bonuses:

• Improved problem solving
• Increased innovation
• More accurate predictions

Greater cognitive diversity leads to better performance and results, especially for complex tasks

Diverse teams more likely to develop radical innovations than non-diverse research and development (R&D) teams

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Why Do Diversity and Inclusion Interventions Matter? Diminishing Representation for Women and URG Scientists

Proportion of women and underrepresented men diminish in more advanced positions along the career path

Percent Representation in Biological/Biomedical Sciences and Medicine, 2017 - 2018

- Associate's
- Bachelor's
- Master's
- Doctoral
- Instructor
- Assistant Professor
- Associate Professor
- Full Professor
- Department Chair

- Women - Underrepresented
- Women - Well-represented
- Men - Underrepresented
- Men - Well-represented

Sources:
To diversify the biomedical research workforce by developing a vision and comprehensive strategy to expand recruitment and retention and promote inclusiveness and equity throughout the biomedical research enterprise.

- Use the NIH Intramural Research Program as a test bed for innovative programming by coordinating evaluation of NIH-wide diversity programs and disseminating effective practices to NIH-funded institutions.
- Establish integrated, institution-wide systems to address bias, faculty equity, mentoring, and work/life issues.
- Invest in the development of the Nation’s scientific workforce to enhance the participation and persistence of individuals of underrepresented groups.
Outline

1. SWD Overview: Why Does Diversity Matter?
2. Initiatives to Address Diversity and Inclusion
   a. Assessing barriers to recruitment and retention
   b. Workforce implicit bias training
   c. NIH Diversity Program Consortium (DPC)
   d. Evidence-based resources and tools
Initiatives to Address Diversity & Inclusion
Assess Barriers to Recruitment and Retention

NIH Workplace Climate and Harassment Survey (2019) assessed landscape of harassment to inform policy efforts

NIH Workforce COVID-19 Impact Survey (July 2020) assessed impact of pandemic on NIH workforce

COVID-19 Extramural Surveys (both October 2020) assessed impact of pandemic on extramural institutions and researchers
Initiatives to Address Diversity & Inclusion
Committee Review Guidance & Implicit Bias Training

• SWD advises committees on ways to reduce biases and improve evaluation of talent during hiring/grant reviews and as well as interactions and decision-making in the workplace.

• Implicit bias trainings can:
  – Elicit awareness of biases
  – Provide an understanding of how they influence our decisions
  – Provide evidence-based strategies shown to help reduce various biases

IN PROCESS
Designing third module that will focus on solutions across key decision-making and interactive contexts at NIH (i.e., scientific, business/operations and other staff)

diversity.nih.gov
In 2012, the NIH Advisory Committee to the Director (ACD) Working Group on Diversity in the Biomedical Research Workforce explored ways to improve recruitment and retention of individuals from diverse backgrounds in the biomedical sciences.

As one component of a broad, trans-NIH strategy, the Common Fund established the Diversity Program Consortium (DPC). Phase I (FY2014 – FY2019): Develop and implement interventions & evaluations; publish early findings.

Phase I committed $500 million over 10 years.

Phase II (FY2019 to FY2023): Focus on continuing interventions, tracking and evaluations, as well as sustainability and dissemination.

diversity.nih.gov
**Initiatives to Address Diversity & Inclusion**

**DPC Phase II Initiatives**

- Long-term impact of DPC is the **broad dissemination of evidence-based effective training and mentoring strategies**

- Phase II is critical:
  - Continue to gather data to test site-specific and consortium-wide interventions
  - Transition into sustainable models for increasing diversity in biomedical fields
  - Disseminate effective strategies to have a lasting national impact

<table>
<thead>
<tr>
<th>Center for Evaluation and Coordination (CEC)</th>
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<tbody>
<tr>
<td>Limited competition—to allow for uninterrupted data collection—review will focus on the strengths and weaknesses of current center, allowing for improvements and course corrections</td>
</tr>
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*Emphasize sustainability and dissemination*

<table>
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<tr>
<th>Building Infrastructure Leading to Diversity (BUILD)</th>
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<tr>
<td>Limited competition—to allow meritorious sites to complete the BUILD experiments</td>
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*Focus on site-specific/consortium-wide experiments; Emphasize sustainability and dissemination*
Initiatives to Address Diversity & Inclusion
Leverage NIH Approaches and Resources

**SWD Interactive Toolkit**
Evidence-based resource to support diversity efforts—provides information on conducting unbiased talent searches, outreach and networking, and mentoring
www.diversity.nih.gov/toolkit

**SWD Website**
Offers research articles, presentations, and blog posts—covering a vast-range of diversity topics at NIH and nationally
www.diversity.nih.gov

**This Month in Diversity**
Monthly newsletter on emerging literature related to scientific workforce diversity; bi-monthly blogs on SWD priority topics and NIH initiatives
Sign Up!
Great minds think differently...

Check out our website at diversity.nih.gov

Sign up for our monthly newsletter and visit our SWD blog for twice monthly updates

Follow us on Twitter @NIH_COSWD

Email us at SWD_Talks@nih.gov
NIH UNITE Initiative
Ericka M. Boone, Ph.D., UNITE Committee E Co-chair; Director, NIH Division of Loan Repayment; Acting Director, NIH Division of Biomedical Research Workforce
April 26, 2021
The NIH UNITE Initiative

- Events of the past year have brought into sharp relief the ongoing reality of racial injustice in our country, and the responsibility of all of us to address this issue
- A series of discussions with NIH leadership and staff listen and identify initial issues
- We have arrived at a shared commitment to address structural racism: we must not allow this pivotal moment to pass
The NIH UNITE Initiative

Understanding stakeholder experiences through listening and learning

New research on health disparities/minority health/health equity

Improving the NIH Culture and Structure for Equity, Inclusion, and Excellence

Transparency, communication, and accountability with our internal and external stakeholders

Extramural Research Ecosystem: Changing Policy, Culture, and Structure to Promote Workforce Diversity
The NIH UNITE Initiative: E Committee

Understanding stakeholder experiences through listening and learning

New research on health disparities/minority health/health equity

Improving the NIH Culture and Structure for Equity, Inclusion, and Excellence

Transparency, communication, and accountability with our internal and external stakeholders

Extramural Research Ecosystem: Changing Policy, Culture, and Structure to Promote Workforce Diversity

Anna Ordóñez, NIMH; Ericka Boone, OER/OD; Jon Lorsch, NIGMS
Extramural Research Ecosystem

To perform a broad systematic evaluation of NIH extramural policies and processes to identify and change practices and structures that perpetuate a lack of inclusivity and diversity within the extramural research ecosystem

*Includes developing strategies to address funding disparities and increase applications that would support individuals from under-represented groups*
Extramural Research Ecosystem

FRAMEWORK
CHANGING NIH POLICIES, CULTURE AND STRUCTURES TO PROMOTE EXTRAMURAL WORKFORCE DIVERSITY AND INCLUSION

Evaluation & Stakeholder Engagement

Immediate Actions

Develop Short- & Long- Term Objectives

INEQUITIES AT EXTRAMURAL INSTITUTIONS: ENVIRONMENT & CULTURE

INEQUITIES AT NIH: PROCESSES & PROCEDURES

URG CAREER PATHWAYS

LIMITED RESOURCES/ CAPACITY AT HBCUs & MSIs
Extramural Research Ecosystem: Current Efforts and Next Steps

➢ Stakeholder Engagement – With U committee
  • Published RFI - Spring 2021; Listening sessions - Spring/Summer 2021

➢ Report Grantee Demographics in NIH Databook – With OER, U, and T committees
  • Expand existing extramural grant funding data – Made available April 23, 2021

➢ Develop Possible Programmatic Proposals (Spring 2021):
  • Career Pathways – Strengthen NIH’s centralized education, outreach and evaluation efforts for existing training and diversity programs and offer greater opportunities for participation in product development ecosystem (academic and small business)
  • Institutional Culture – Provide support for academic institutions to conduct in-depth self-studies/climate assessments and enact action plans to enhance opportunities to participate in Federal grants/awards process
  • NIH Processes – Assess interactions between NIH staff and extramural community to identify barriers and bias to inform new programs and enhance equity in NIH processes
  • Research Capacity at Minority-Serving Institutions – Expand targeted outreach, communications, technical assistance and funding opportunities for HBCUs and MSIs

nih.gov/ending-structural-racism
The NIH UNITE Initiative to Strengthen Diversity, Equity, and Inclusion: Together, We’re Stronger
Summary of Initial UNITE Recommendations

• Publicly commit to identifying and correcting any NIH policies or practices that may have helped to perpetuate structural racism
• Continue to aggressively implement approaches to address the “Ginther Gap” and enhance portfolio diversity
• Launch a multi-phased, -tiered, and -integrated Common Fund Initiative focused on transformative health disparities research initiatives to reduce health disparities/inequities
• Ensure a robust NIH Enterprise-wide commitment to support the NIMHD FOA focused on the effects of structural racism and discrimination on health disparities/inequities; encourage funding levels that are commensurate with overall IC resources
• Develop a sustainable process to systematically gather and make public the demographics of our internal and external workforce
Summary of Initial UNITE Recommendations

• Implement policy changes that promote anti-racism and remove barriers to professional growth for staff from diverse backgrounds, including underrepresented groups

• Appoint a diversity, equity, and inclusion officer in every IC, with direct access to the IC Director, to track, advance, and coordinate IC-specific equity, diversity, and inclusion efforts and actively participate in NIH-wide diversity efforts

• Expand the Distinguished Scholars Program to Senior Investigators hired with tenure and enhance recruitment of researchers from underrepresented groups as candidates for open IRP investigator positions
Acknowledgement

“To those individuals in the biomedical research enterprise who have endured disadvantages due to structural racism, I am truly sorry. NIH is committed to instituting new ways to support diversity, equity, and inclusion, and identifying and dismantling any policies and practices at our own agency that may harm our workforce and our science.”

— Francis S. Collins, M.D., Ph.D., NIH Director

https://www.nih.gov/ending-structural-racism
The NIH UNITE Initiative to Strengthen Diversity, Equity, and Inclusion: Together, We’re Stronger

**UNITE Co-Chairs:**
- Marie A. Bernard, National Institute on Aging/NIH Office of the Director
- Alfred Johnson, NIH Office of the Director/Office of Management
- Lawrence Tabak, NIH Office of the Director

**UNITE Program Manager**
- Victoria Rucker, Center for Information Technology/NIH Office of the Director

**UNITE Program Support**
- Jordan Gladman, NIH Office of the Director
- Melissa Espinoza, National Institute on Aging

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**U**
- Courtney Aklin (IMOD/OD)
- Mia Rochelle Lowden (ORIP/OD)
- Monica Webb Hooper (NIMHD)
- Shelli Aveonevli (NIMH)
- Dexter Collins (FIC)
- Laura Cooper (NIAMS)
- Kevin Davis (CIT)
- Leslie Littlejohn (NIAMS)
- Troy Muhammad (NCI)
- Ian Myles (NIAD)
- Roland Owens (OIR/OD)
- Kelly Ten Hagen (NIDCR)
- Brian Trent (NEI)
- Della White (NCCIH)
  + Cara Finley (IMOD/OD)
  + Stephanie Land (NCI)
  + Vanessa Marshall (NIMHD)
  + Kamilah Rashid (IMOD/OD)

**N**
- Michele K. Evans (NIA)
- Anna María Nápoles (NIMHD)
- Robert Rivers (NIDDK)
- Gwen Bishop (NIDCD)
- Vence Bonham (NHGRI)
- Juanita Chinn (NICHHD)
- Janine Clayton (ORWH/OD)
- Kathy Etz (NIDA)
- Justin Hentges (AoU/OD)
- Daryl Holder (CC)
- Samantha Jonson (NCATS)
- Joan Romaine (NIAAA)
- Asha Storm (NIBIB)
- Shannon Zenk (NIR)
  + Melissa Espinoza (NIA)

**I**
- Trevor Archer (NIEHS)
- Marie A. Bernard (Acting COSWD/OD; NIA)
- Alfred Johnson (OM/OD)
- Talin Barnes (NIEHS)
- Gwyn Collins (NCI)
- Charles Egwuagu (NEI)
- Courtney Fitzhugh (NHLBI)
- Kenneth Gibbs (NIAMS)
- Bernard Harper (CC)
- Kendall Hill (CSR)
- Camille Hoover (NIDDK)
- Shaw Lewis (NIR)
- Marguerite Matthews (NINDS)
- Shaun Sims (NIBIB)
  + Melissa Espinoza (NIA)

**T**
- Amy Bany Adams (NINDS)
- John Burklow (OCPL/OD)
- Sadhana Jackson (NINDS, NCI)
- Mohammed Aiyegbo (NIAD)
- Albert Avila (NIDA)
- Samantha Calabrese (NICHHD)
- Nelvis Castro (NCI)
- Angie Cruz-Albertorio (NCATS)
- Carla Garrett (OCPL/OD)
- Carl Hashimoto (OIR/OD)
- Nakaia Makonnen (NIDCD)
- Eric Refslund (NIAD)
- Wayne Wang (NHGRI)
- Cassie Williams (NIAAA)
  + Jesse Isaacman-Beck (IMOD/OD)

**E**
- Ericka Boone (OER/OD)
- Jon Lorsch (NIGMS)
- Anna Ordóñez (NIMH)
- Eddie Billingslea (ORWH/OD)
- Tiffany Calvert (NIBIB)
- Rena D’Souza (NICHD)
- Zeynep Erim (NIBIB)
- Leonardo Garzon-Velez (FIC)
- Bettie Graham (NHGRI)
- Leah Hubbard (NCI)
- Patricia Jones (NIA)
- Vonda Smith (CSR)
- James Washington (NINDS)
- Maryam Zaringhalam (NLM)
+ Mark Stevens (OM/OD)

Committee Co-Chairs
++ Staff Leads
Injustice anywhere is a threat to justice everywhere

Martin Luther King, Jr