

# TCRDF and HBCU RAIN

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# Tougaloo College Research and Development Foundation

*The mission of the Tougaloo College Research and Development Foundation is to support the research and development mission of Tougaloo College and that of other Historically Black colleges and Universities (HBCUs).*

# History of Tougaloo College Research and Development Foundation (TCRDF)

Minimal Federal Research Dollars at HBCUs

Idea Presented in October 2015

Approval Granted in May 2016

Incorporated as Non-profit in October 2016

# TCRDF Completed Activities

Supported ~\$2  
Million in Research  
Projects

Secured a three-  
year contract  
totaling \$1.5 million

Provided 75% of the  
salary for a PhD in  
Cybersecurity

Conducted HBCU  
Research and  
Innovation Week\*

Conducted HBCU  
Cyber Week\*

Formed  
partnerships with  
Amazon Web  
Services, Georgia  
Tech, and ZOOM\*

\*partnership with HBCU RAIN

# HBCU Research and Innovation Network (HBCU RAIN)

Network of Professionals to Support:

- Sustainable Infrastructure for HBCUs/MSIs Through Public and private Sector Research and Contracts.
- Black Women in Higher Education Through Empowerment Initiatives Related to Holistic Wellness and Professional Networking.

# Business Advisory Board

- The Business Advisory Board provides guidance, counsel and assistance to educational partners to navigate the federal government procurement process.
- Specifically, Board members serve in the following capacities:
  - Provide guidance and mentorship
  - Introduce educational partners to federal government and business leaders
  - Help match educational partners to specific research opportunities
  - Assist educational partners in finding and gaining access to needed resources
  - Give feedback on projects and presentations
- Finally, Business Advisory Board members may serve as subject matter experts (SMEs) on funded projects and receive compensation for their services on those projects, where applicable.

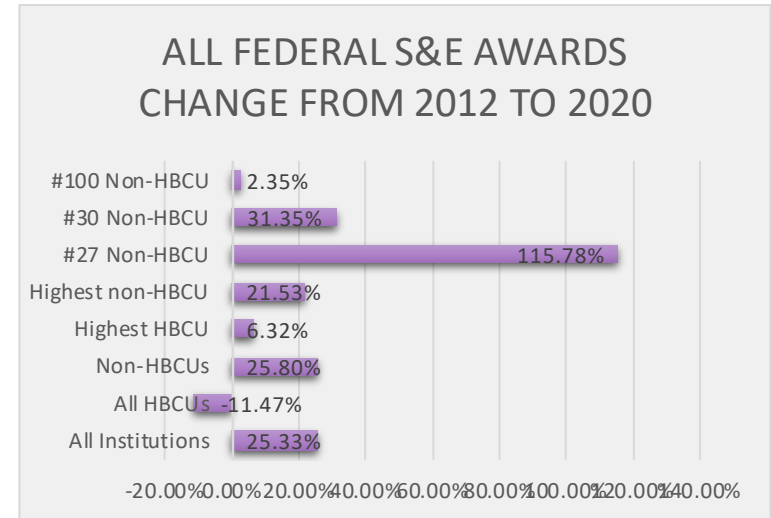
# Federal Awards Data Gathering Methodology

Examined DOD obligations for science and engineering to Universities and Colleges from fiscal year 2012 through fiscal year 2020 as reported by the National Center for Science and Engineering Statistics (NCSES) of the National Science Foundation (NSF)

# All Federal Science & Engineering Award Data

Comparison in Thousands of Dollars

|                            | 2012            | 2020            | % Change |
|----------------------------|-----------------|-----------------|----------|
| <b>All Institutions</b>    | \$31,216,406.90 | \$39,122,152.20 | 25.33%   |
| <b>All HBCUs</b>           | \$ 400,293.10   | \$ 354,390.20   | -11.47%  |
| <b>All HBCU % of Total</b> | 1.28%           | 0.91%           |          |
| <b>Non-HBCUs</b>           | \$30,816,113.80 | \$38,767,762.00 | 25.80%   |
| <b>Highest HBCU</b>        | \$ 26,687.90    | \$ 28,374.70    | 6.32%    |
| <b>Highest non-HBCU</b>    | \$ 1,606,900.50 | \$ 1,952,917.90 | 21.53%   |
| <b>#27 Non-HBCU</b>        | \$ 196,922.50   | \$ 424,923.00   | 115.78%  |
| <b>#30 Non-HBCU</b>        | \$ 274,404.10   | \$ 360,439.90   | 31.35%   |
| <b>#100 Non-HBCU</b>       | \$ 97,290.30    | \$ 99,573.90    | 2.35%    |



- The highest HBCU Award is less than 2% of the highest non-HBCU and 1/3 of the 100<sup>th</sup> Non-HBCU
- While awards to all institutions increased by 25% during this period, awards to HBCUs decreased by more than 10%

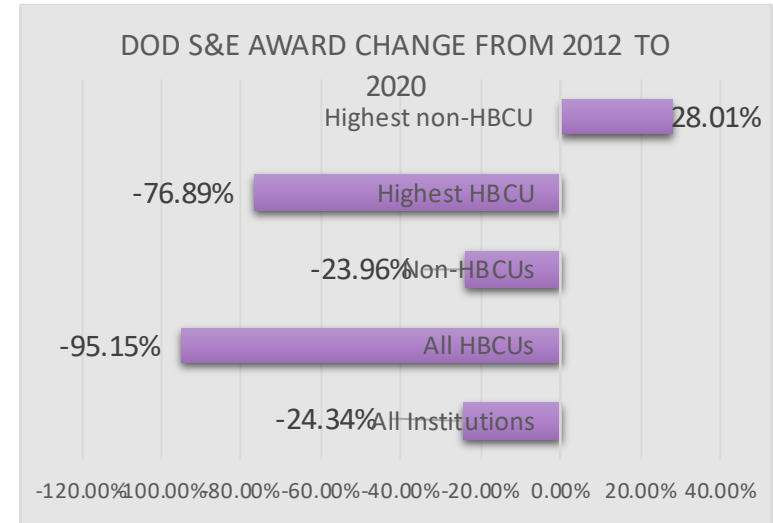


# DOD Science & Engineering Award Data

Comparison in Thousands of Dollars

|                     | 2012           | 2020           | % Change |
|---------------------|----------------|----------------|----------|
| All Institutions    | \$3,636,630.40 | \$2,751,584.80 | -24.34%  |
| All HBCUs           | \$ 19,387.80   | \$ 939.90      | -95.15%  |
| All HBCU % of Total | 0.53%          | 0.03%          |          |
| Non-HBCUs           | \$3,617,242.60 | \$2,750,644.90 | -23.96%  |
| Highest HBCU        | \$ 2,466.00    | \$ 569.90      | -76.89%  |
| Highest non-HBCU    | \$ 709,641.40  | \$ 908,394.80  | 28.01%   |

- While funding overall decreased HBCUs saw significantly more of a decrease
- The share of dollars awarded to HBCUs decreased by two orders of magnitude in the last decade
- The highest award at an HBCU (Howard University) was more than three orders of magnitude less than the highest awarded University in 2012



- The gap increased to four orders of magnitude in 2020 – while the highest awarded University increased by almost 30% the highest awarded HBCU decreased by over 75%

# Why Participate in Research

- Students
  - Enhance students educational and research skills
- Faculty
  - Increase skill-set and growth of the faculty
- University
  - Increase the revenue source for the institution
- Mankind
  - Create new technologies for our country and world

# University Research Infrastructure

- Research Set-up
  - Pre-award and post-award
- Accounting Oversight
  - Account set-up, purchasing, and draw-downs
- Provide release time for faculty
- Ensure release funds stay in originating department
- Incentivize faculty
  - Arrange for start-up funds
  - Create indirect return policy
  - Award Researcher of the Year

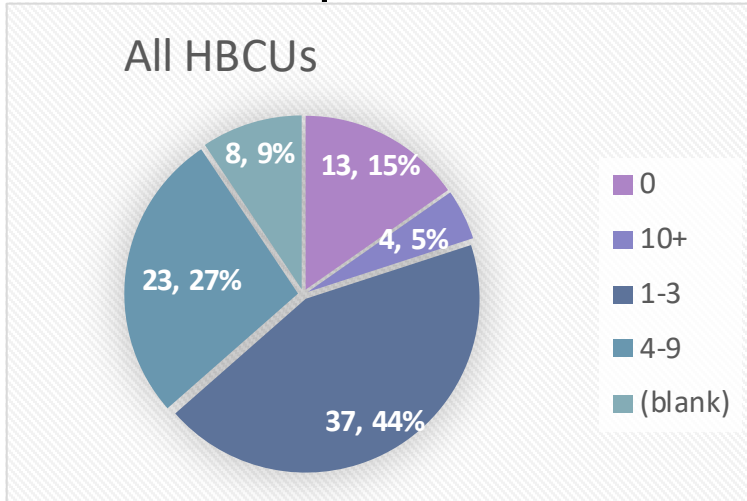
# HBCU Data Gathering Methodology

Conducted a survey through the National Sponsored Programs Administrators Alliance (NSPAA of HBCUs, Inc.)

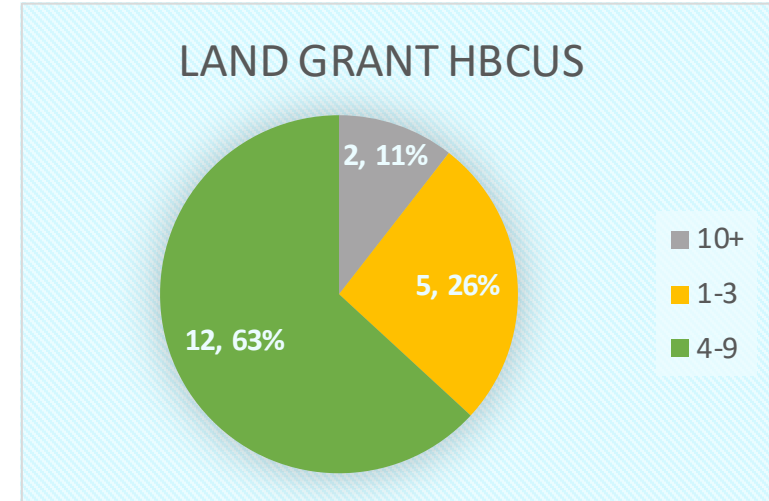
Web research – Reviewed the website of all 85 four-year HBCUs

Personal contact with University sponsored programs administrators

# HBCU Sponsored Programs Staff



- 15-24% have no office at all
- Only 4 of 85 have fully-staffed offices
- Of the 44% that have one to three staff members, many have less than a single full-time staff member



- Land Grant Universities fare better with all 19 having a sponsored programs office
- Half of the offices with 10 or more staff are Land Grant
- The vast majority have four or more staff

# Teaching and Learning Capacity-Building Strategies

- Identify effective ways to prepare and support teachers and faculty who can inspire and challenge students
- Invest in research on learning, facilitating the translation of research into practice and create supportive learning environments
- Ensure that the STEM community is broadly representative of the nation's individuals, geographic regions, types of institutions, and STEM disciplines
- Identify effective ways to address STEM knowledge requirements to have a productive workforce

# Research Infrastructure Capacity Building Strategies

- Partnerships and Long-term engagement strategies
  - Faculty/student teams with paid summer engagements at DOD facilities and R1 DOD labs would augment faculty salaries, provide students with needed funds to continue their education, and help address issues of student exposure
  - DOD personnel on loan to HBCU to build new programs in areas of national need
  - HBCU consortia to focus on specific issues
- Technical assistance to build research infrastructure
- Capacity building grants focused on the University pain points
  - Contract and research compliance assistance and infrastructure - build sponsored programs offices and/or support shared sponsored program services
  - Initial funding for facilities, equipment, and personnel for research and curricula in areas of national defense need

Q & A



# Contact Us

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