

How Universities with Healthy Research Ecosystems Can Help Foster Greater Inclusivity

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Creativity knows no racial barriers. Brilliant ideas may come from anyone. Yet African Americans and members of other minority groups remain under-represented at the faculty level in science, technology, engineering, and mathematics (STEM).¹ As we celebrate Black History Month here in the United States, this editorial reflects on the well-documented racial funding gap in research and highlights an initiative aimed at reversing this trend.

Over the past few years, the scientific community has come together to recognize and address structural factors that cause these disparities. In 2020, the American Chemical Society published a joint editorial (DOI: [10.1021/acs.jced.0c00559](https://doi.org/10.1021/acs.jced.0c00559)), “Confronting Racism in Chemistry Journals,” in which it acknowledged the “terrible reality that systemic racism and discrimination impacts the daily personal and professional lives of many members of the scientific community and broader society.”

Inextricably linked to publishing is the ability to win competitive federal funding. This is an area where much remains to be done. A 2011 study² sponsored by the National Institutes of Health (NIH) reported that, after controlling for an applicant’s educational background, country of origin, training, previous research awards, publication record, and employer characteristics, the probability of being awarded an NIH R01 research grant was 10 percentage points lower for African American applicants compared to that of White applicants. The authors suggested that the racial gap in funding stemmed from cumulative disadvantages, such as lack of resources and mentoring, as well as structural disadvantages correlated with race, such as biases against African American applicants or the topics of research that they tend to pursue.

Funding disparities³ hinder African American researchers in one of the most critical aspects of academic success. Failure⁴ to obtain federal grants may reduce opportunities to obtain tenure-track positions, earn tenure, and advance to full professor and can lead individuals to exit academia altogether. The lack⁵ of African Americans in faculty positions means there could be fewer African American scientists to serve as mentors and role models for students and early career scientists, and fewer leaders who can help overturn entrenched structural barriers.⁶

A perhaps even more damaging outcome of the racial bias in funding is its impact on the forward progress of research and innovation. Lack of funding can prevent African American researchers from conducting research on a range of questions of importance to all humanity. In addition, without funding, African American researchers are less likely to establish


research collaborations that drive new discoveries and ultimately lead to insightful and groundbreaking technologies.

How can universities with healthy research ecosystems help? At my home institution, one of the initiatives we are launching aims to support inclusive research and innovation by funding collaborations between Princeton University faculty and their colleagues at historically black colleges and universities (HBCUs). Why? Such new collaborations have the potential to expand overall research output, stimulate the creation of intellectual property and technology transfer, and enable talented scientists to address scientific and technological challenges.

HBCUs play a significant role in the pipeline for many African American scientists. Although 15% of Blacks who received a bachelor’s degree in 2016 did so from an HBCU, 25% of graduates⁷ who earned a science or engineering doctorate degree between 2013 and 2017 earned their bachelor’s degree from an HBCU.

These collaborations bring together scientists from a well-funded research institution and those that have faced structural barriers to funding. By strengthening connections across institutions, we hope to enable impactful research that might otherwise go unfunded. Although we are starting with HBCUs, we anticipate creating similar programs aimed at forging research collaborations with other minority-serving institutions and women’s colleges.

The opening of collaborative research channels across institutions is a small step toward leveling the racial disparity in funding, but it is a concrete action that universities with healthy funding levels can take. Furthermore, actions such as these are essential if we are to enable the nation’s creative and brilliant individuals to apply their talents to the challenges of our time.

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<https://pubs.acs.org/10.1021/jacsau.2c00056>

Notes

Views expressed in this editorial are those of the author and not necessarily the views of the ACS.

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■ NOTE ADDED AFTER ASAP PUBLICATION

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