



Stephen Thomas (center) is a researcher at the University of Maryland in College Park who helps train barbers to be health advocates for their customers. CADE MARTIN

Study identifies a key reason black scientists are less likely to receive NIH funding

By [Jeffrey Mervis](#) | Oct. 9, 2019 , 2:00 PM

In 2011, a study led by economist Donna Ginther of the University of Kansas in Lawrence found that black applicants were significantly less likely than white applicants to be funded by the National Institutes of Health (NIH). Since then, NIH officials have examined a host of factors that might cause the disparity, from the historical advantages that white men enjoy to overt discrimination by grant reviewers. But the picture remains cloudy.

Now, NIH scientists have identified [**a key factor they hadn't previously considered**](#): the topics that black

Science's extensive COVID-19 coverage is free to all readers. To support our nonprofit science journalism, please [make a tax-deductible gift today](#).

Got a tip?

[How to contact the news team](#)

Advertisement

Support nonprofit science journalism

Science's extensive COVID-19 coverage is free to all readers. To support our nonprofit science journalism, please [make a tax-deductible gift today](#).

[Donate](#)[Not Now](#)

proposal with a poorer score is less likely to be funded. The finding is already prompting discussion about whether that disparity is rooted in NIH's priorities—and whether those priorities should be rethought.

The study, published today in *Science Advances*, is based on some 157,000 proposals submitted between 2011 and 2015 for NIH's bread-and-butter R01 grants. After analyzing the text, researchers placed each proposal into one of 150 topic areas. Then they examined six factors that could influence the final outcome. They found that three contributed to creating the "Ginther gap"—whether a proposal is scored (more than half are not), what score it receives, and the applicant's choice of topic.

Among scored proposals, topic choice emerged as the second biggest contributor to the Ginther gap. (It trailed only an applicant's track record, which was the focus of a previous study.) Topic choice accounts for 21% of the overall funding disparity, the researchers found. Three other factors—how frequently scientists send in proposals, how NIH institutes acted on study section recommendations, and whether a scientist revised a rejected proposal and tried again—were found not to contribute to the gap.

The authors reject the idea that an especially "harsh" study section could contribute to the disparity. As many as 49 different panels received proposals within a particular topic area. Similarly, a single panel handled proposals touching on as many as 27 topics, reducing its influence on any given topic. The paper also reminds readers that "numerous analyses have

Advertisement

Support nonprofit science journalism

Science's extensive COVID-19 coverage is free to all readers. To support our nonprofit science journalism, please **make a tax-deductible gift today**.

[Donate](#)[Not Now](#)[SEARCH](#)

where the disparity occurs, says co-author James Anderson, who directs NIH's Division of Program Coordination, Planning, and Strategic Initiatives. But it doesn't answer the question of why reviewers are "less excited about" proposals on topics that disproportionately interest black scientists, he admits.

"This study just looked at the numbers. The next step is to ask the people who made the decisions." No such studies are in the works, he adds.

Some researchers not involved in the study speculate that the explanation for the disparity goes beyond possible reviewer bias, to how NIH sets spending priorities and the larger societal factors that drive those decisions. "I think the bias is more structural than racial," says Stephen Thomas, a professor of health services at the University of Maryland in College Park. "It's really a disciplinary bias. The current NIH system favors basic science with no regard for practical applications over research that applies what we already know to address the health crisis facing our country."

Thomas, who directs the NIH-funded Maryland Center for Health Equity, says he's not surprised that many black researchers want to tackle pressing community problems. "As an African American who came up through the academic ranks and has the scars to prove it, I can understand why someone growing up among people who have been systematically discriminated against may be motivated to become a scientist because of a desire to address those problems," he says. "I'm not saying that doesn't motivate white scientists, too. But I've seen it in many of my students."

1. [The legendary dire wolf may not have been a wolf at all](#)

2. [Japan plans to release Fukushima's contaminated water into the ocean](#)

3. ['Sink into your grief.' How one scientist confronts the emotional toll of climate change](#)

4. [Chinese COVID-19 vaccine maintains protection in variant-plagued Brazil](#)

5. [National academy may eject two famous scientists for sexual harassment](#)

Most Read

1. [Hard choices emerge as link between AstraZeneca vaccine and rare](#)

2. [One number could help reveal how infectious a COVID-19 patient is.](#)

3. [Top German psychologist fabricated data, investigation finds](#)

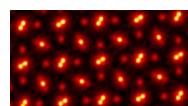
4. [Particle mystery deepens, as physicists confirm that the muon is more magnetic than predicted](#)

5. [Food supplements that alter gut bacteria could 'cure' malnutrition](#)

Sifter

[Physicists take the most detailed image of atoms to date](#)

By Anil Oza | Jun. 30, 2021



[Dinosaurs may have lived in the](#)



Support nonprofit science journalism

Science's extensive COVID-19 coverage is free to all readers. To support our nonprofit science journalism, please [make a tax-deductible gift today](#).

[Donate](#)[Not Now](#)

Mentoring Network, which is working to boost the fortunes of minority scientists.

But mentoring isn't the only challenge black applicants face. Because almost all reviewers are also NIH grantees, the dearth of black scientists receiving R01 awards—1% of the total in 2018—translates into few black reviewers. That means fewer people who, because of their backgrounds, "might have different opinions on the significance of some grant applications," the paper notes.

The disparity could also reflect a broader phenomenon in which work by women and minorities is often seen as having lower status, says Molly Carnes, a professor of women's health at the University of Wisconsin in Madison who has studied implicit bias. "I don't think that NIH reviewers are consciously saying, 'This project is more worthy of funding because the proposal is associated with traits seen as high status,'" Carnes says. "It's just the way people's minds work."

Carnes applauds NIH for doing the study "because now [this issue] can be addressed." One possible remedy, she says, is to redefine some of the topics favored by black scientists in a way that grants them higher status. For example, she notes that a field once called "community-based research" has been renamed "implementation science" to emphasize its focus on moving research findings from the bench to the bedside. A more rigorous study design can also impress reviewers, she adds.

The authors recommend that NIH institute directors consider spending more of their budgets in areas "that

[Soil without detectable life discovered in Antarctica](#)

By Alex Viveros | Jun. 18, 2021



[This homely mollusk's rock-hard chompers are made of rare minerals](#)

By Sofia Moutinho | Jun. 2, 2021



[More Sifter](#)

Support nonprofit science journalism

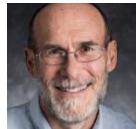
Science's extensive COVID-19 coverage is free to all readers. To support our nonprofit science journalism, please [make a tax-deductible gift today](#).

of scientific workforce diversity, wrote in a release accompanying the paper.

Any intervention will need community buy-in, Thomas and Carnes add. "You have to work within the system," Carnes says, "and mold it to what you want to achieve."

Posted in: **Science and Policy**

doi:10.1126/science.aaz7929



Jeffrey Mervis

Jeff tries to explain how government works to readers of *Science*.

[Email Jeffrey](#)

More from News

New NASA radiation standards for astronauts seen as leveling field for women



U.S. House backs higher spending levels for NSF and DOE science



Diversion of research money to buy oil refinery enrages Mexican scientists



Support nonprofit science journalism

Science's extensive COVID-19 coverage is free to all readers. To support our nonprofit science journalism, please **make a tax-deductible gift today**.