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Black researchers are making small gains in representation in the life sciences.

## US SCIENCE STATIC ON DIVERSITY

Black and Hispanic representation in the science workforce has hardly budged in recent years.

By Chris Woolston

**M**embers of minority ethnic groups have made only modest inroads into US science, technology, engineering and mathematics (STEM) positions in recent years, according to an analysis of nearly 20 million people.

The analysis was conducted by the Pew Research Center, a non-profit organization in Washington DC, and used data collected by the Integrated Public Use Microdata Series American Community Survey. It found that Black people accounted for 9% of the STEM workforce in 2019 (see [go.nature.com/3n-pk1s](https://go.nature.com/3n-pk1s)). That's the same proportion as in 2016, suggesting a lack of progress at a time when

many companies and universities had pledged to promote diversity. Over the same period, the proportion of Hispanic workers in STEM jobs rose from 7% to 8%. Black and Hispanic people make up 12% and 17% of the US workforce, respectively.

The data reveal some modest gains for under-represented minorities. For example, Black employees accounted for 6% of all jobs in

**“Whether it’s politics or negative stereotypes, they don’t feel welcome or completely satisfied.”**

the life sciences in 2019, up from 4% in 2016. In that same period, the proportion of Hispanic employees in the life sciences increased from 7% to 8%. They also accounted for 8% of all jobs in the mathematics field in 2019, up from 6% in 2016. Over that period, the percentage of Black people in maths-related jobs held steady at 9%.

Asian people, who made up 6% of the working population in the United States in 2019, held 19% of positions in life sciences and 18% of positions in physical sciences. Asian people accounted for 13% of the STEM workforce overall, the same proportion as in 2016.

The report also found that the percentage of women in STEM fields has remained stable. In 2019, women accounted for 47% of the overall workforce and 50% of the STEM workforce.

### Links to education

The continued lack of racial diversity is a bit surprising, says Marcus Lambert, a higher-education researcher at SUNY Downstate Health Sciences University in New York City. He notes that the trend persists despite some gains in the enrolment of members of minority ethnic groups in university science programmes. “The STEM workforce is connected to the educational pathways,” he says. “If people are switching majors and dropping out of STEM programmes, we’re not doing our jobs.”

Lambert was a co-author of a 2020 study that surveyed more than 1,200 biomedical postdoctoral researchers in the United States about their career plans (W. M. Lambert *et al. eLife* 9, e48774; 2020). It found that 24% of male postdocs from minority ethnic groups had decided to get out of research or leave science altogether, even though they had already gone far in their training. For comparison, only 14% of white postdocs were planning to quit research or leave science.

Lambert’s survey found that even some highly productive postdocs from minority ethnic groups who had authored a number of high-quality publications didn’t feel completely comfortable in their jobs. “It’s not that they don’t love science,” he says. “Whether it’s politics or negative stereotypes, they don’t feel welcome or completely satisfied.”

The Pew report found that representation of people from minority ethnic groups varied greatly depending on the job in question. For example, within the life sciences, the proportion of Black people employed as technicians in the food or agriculture industry (12%) was six times the proportion who worked as conservation scientists and foresters (2%). In the physical sciences, Hispanic representation was more than twice as high in chemical

technicians (12%) as in astronomers and physicists (5%).

Many US universities have pledged to increase diversity in hiring, but progress has been notably slow, says Melanie Okoro, a water-quality researcher and chief executive and principal scientist at Eco-Alpha Environmental and Engineering Services, a consulting company in Sacramento, California. Okoro is

also a board member of MSPHD's, an initiative sponsored by NASA and the US National Science Foundation to increase minority participation in Earth sciences. Part of the problem at the university level, she says, is that predominantly white institutions have been reluctant to partner with minority institutions, such as Howard University in Washington DC, to identify qualified applicants.

Okoro thinks that private companies such as hers could help drive progress towards more equitable representation in STEM fields. "As someone who owns a company, I'm very intentional in who I hire and the culture that my company can reflect," she says. In the big picture, she says, "significant strides are being made to support a diverse and inclusive workforce, but sustainable changes will take time".

# SCIENTISTS CARRY ON THROUGH THE PANDEMIC

## Researchers have turned to analysing data and reviewing papers while lab time remains restricted.

By Chris Woolston

**N**early all respondents (97%) to a global survey of 2,000 researchers reported that the COVID-19 pandemic has affected their work – and half reported 'significant' impact – but most are staying productive despite the disruptions. Those are among the key findings of a study of users of ResearchGate, the Berlin-based scientific social-network and paper-sharing site (see [go.nature.com/quu7](https://go.nature.com/quu7)).

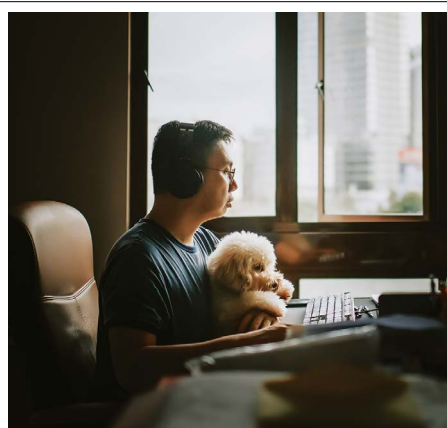
The survey was conducted over an 18-hour period on 19 February. The survey report does not disclose where respondents live or their disciplines or career stages.

Two-thirds of respondents are continuing to work on data analysis and experimental planning, even if they have to wait until lockdowns are lifted to do the experiments. In the comment section of the survey, a researcher whose institution was closed at the time reported that they had found other ways to work. "The positive is that I have had the opportunity to study a large quantity of research papers, write two review articles, and complete one research paper."

Another researcher noted the extra obstacles to doing research during the pandemic: "A lot of my time is spent devising ways to accomplish tasks that would have been easier in the lab or face-to-face."

The pandemic has transformed the research workplace. In the survey, more than eight out of ten respondents said they work from home. Of those, about one-third reported that they weren't working exclusively at home, suggesting that they occasionally ventured to the office or the laboratory.

The ResearchGate survey underscores the fact that scientists can stay productive even during catastrophe, says Alisa Wolberg, a haematology researcher at the University of



Amid the pandemic, scientists stayed busy.

North Carolina (UNC) at Chapel Hill. Wolberg and one of her PhD students, Dre'Von Dobson, co-authored an article published last September that discusses some of the pandemic's 'silver linings' for scientific research (D. A. Dobson *et al. Res. Pract. Thromb. Haemost.* **4**, 1083–1086; 2020).

**"Papers are being written en masse. I've had to review four times more papers than usual during this time."**

Wolberg notes that researchers have had more time to ponder the big picture of their work – or, as she puts it, there's been "less pipetting and more thinking". "I don't want to undersell how tragic this experience has been," she says. "But scientists find problems and solve them. We're going to stay busy with the other things that our jobs entail."

The survey's findings don't precisely correspond with the results of other studies that

found that the pandemic has significantly disrupted not just many people's scientific output, but also their careers.

### Pros and cons

In the ResearchGate survey, 40% of respondents said they had spent more or much more time searching for and reading scientific literature. Slightly more than half have spent more or much more time writing, submitting and peer-reviewing papers. "Papers are being written and submitted en masse," wrote one respondent. "I've had to review four times more papers than usual during this time."

The pandemic has slowed some of Dobson's experimental work. On the upside, he's been able to build up his network of colleagues and mentors through video conferencing. For example, his group at the UNC shares its weekly lab meetings with a group led by James Luyendyk at Michigan State University in East Lansing. "I feel like I've gained another mentor," Dobson says. For 62% of respondents, the amount of time they spend collaborating with others either stayed the same or increased.

All of that connectivity has a downside, however, especially when it comes to teaching duties: 40% of respondents have spent more or much more time teaching during the pandemic, and the comment section reflected widespread frustration with the demands of online instruction. "Online teaching duties require far more preparation," wrote one respondent. "Work-life balance has been destroyed."

Dobson acknowledges that the pandemic has complicated his research and training – but, like many survey respondents, he's moving ahead. "The bad things outweigh the good, but there are things that we can all take with us from this experience."

**Correction**

The citation in 'Scientists carry on through the pandemic' misidentified the first author. The paper was written by D. A. Dobson *et al.*, not by A. Dre'Von *et al.*