

FUNDING

NIH program fails to launch blacks in biotech

Small Business Innovation Research program makes almost no grants to African-Americans

By Jeffrey Mervis

The National Institutes of Health (NIH) gave out three-quarters of a billion dollars this year as part of a long-running federal research program to encourage innovation among small businesses. But for African-American scientists, the Small Business Innovation Research (SBIR) program may as well not exist.

A new study by the U.S. National Academies of Sciences, Engineering, and Medicine documents their near-invisibility in the NIH program, which each year gives out hundreds of awards to help small businesses translate biomedical discoveries into products. In a survey of principal investigators (PIs) who received a late-stage SBIR award between 2001 and 2010, just two of the 604 respondents were African-American. Hispanics did only slightly better, earning 2% of these phase II awards, and there was one Native American PI (see graphic, right). “Levels of participation by underserved groups are low and declining,” the new report concludes.

The low minority participation in NIH’s SBIR program mirrors that of other NIH programs. A 2011 NIH study of its core R01 science grants reported that just 1.4% of applicants were African-American and 3.2% were Hispanic (*Science*, 19 August 2011, p. 925). The so-called Ginther report also found that black applicants were less likely than whites to win NIH funding; the gap was 10 percentage points. Similarly, the new academies report finds that minority-owned businesses have a lower success rate in winning initial SBIR grants than majority-owned businesses (10% versus 18% in 2014, for example).

The numbers are symptomatic of the vanishingly small presence of black scientists in the biotech sector, note those who follow the issue. “SBIR is the end of the pipeline for a successful scientist who plans to commercialize a discovery,” says Chad Womack, who runs a science scholarship program for minorities sponsored by the United Negro

College Fund and the Merck Foundation. “And there just aren’t enough African-American scientists in that space, at that level, to take advantage of the opportunity.”

Womack, an African-American biomedical researcher, has firsthand knowledge of the problem: NIH rejected his 2007 SBIR application for a company he co-founded after doing a postdoc at the agency, and the tiny vaccine development startup fell victim to the 2008 financial meltdown. But he doesn’t fault NIH. “I think SBIR is a great program; in fact, I’d love to see it expanded.”

Offered by 11 federal agencies, SBIR awards, typically up to \$150,000 in phase I and \$1 million in phase II, are funded

according to the academies panel, chaired by Jacques Gansler, a former top Pentagon official now at the University of Maryland, College Park.

“The objective of fostering the participation of women and underserved minorities has not been met” by the NIH program, the new report concludes. The earlier report reached a similar conclusion for DOD.

Matthew Portnoy, who oversees NIH’s SBIR and STTR programs, says the report reaffirms a 2009 academies study that concluded “we are meeting the [innovation] goals but we are having a problem with outreach.” NIH initially tried to broaden participation by improving the geographic distribution of its grants, he says. Now, it plans to focus more explicitly on outreach to minorities and women. “It’s not an easy problem,” he adds, “and we’re definitely interested in any good ideas.”

One approach the panel explicitly rejected was using quotas to boost minority participation. “You lower your standards by doing that,” Gansler says. “It’s not a charity; a lot of agencies already object to SBIR because they see it as a drain on their research programs.”

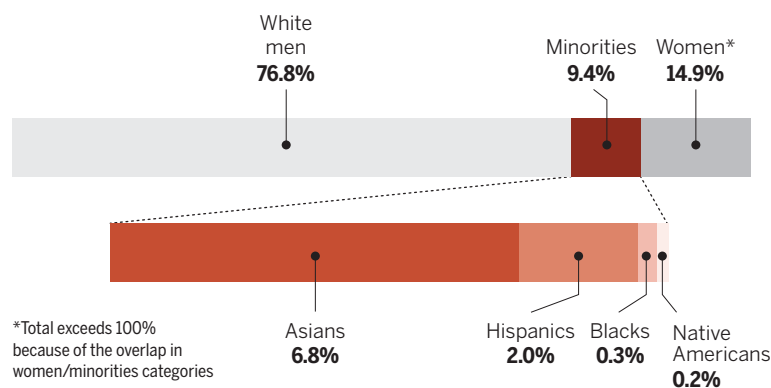
Womack believes part of the answer is more support for minority scientists. “If you really want to pump up the numbers,

then you have to help people with the nuts and bolts of what it takes” to prepare a strong application, he says. A more comprehensive strategy would start by connecting with undergraduate and graduate students, says Womack, who hopes that the next phase of his scholarship program will focus on “bioentrepreneurship.”

Talitha Hampton, a program manager for AstraZeneca in Gaithersburg, Maryland, and president of the National Organization of Black Chemists and Chemical Engineers, is looking even farther upstream to elementary schools. She said a recent hands-on science workshop for minority students in Maryland, called The Crayon CEO, helped install more positive attitudes toward entrepreneurship. “That’s where it has to start.” ■

Nearly invisible

A new study finds that African-Americans make up a tiny slice (bottom bar) of the small percentage of minorities who are principal investigators on NIH SBIR grants.



through a small tax on the extramural research budgets of each agency. That tax has been rising slowly, and will reach 3.2% in 2017. An additional 0.45% goes to a sister program, called Small Business Technology Transfer (STTR), which funds university-based startups. In 2015, the government spent \$2.3 billion on SBIR/STTR, with nearly half funneled through the Department of Defense (DOD); NIH is the second largest player in the SBIR program.

NIH and DOD are generally doing well in meeting SBIR’s overall goal of backing innovation by small businesses, according to the new NIH report and one done earlier this year on DOD’s program. But SBIR also has an explicit mandate from Congress to enhance opportunities for women and minorities. And that’s not happening,