FUNDING

A peek at peer review helps young scientists

Service on NIH study sections boosts success rates on grants but not diversity

By **Jeffrey Mervis**

Winning a grant from the National Institutes of Health (NIH) is hard, especially if it's your first. Sitting in judgment of other grant applicants before applying for your own can help, new data from a pilot project called the Early Career Reviewer (ECR) Program suggest. Yet the program may not be meeting another key goal: helping close a stark racial disparity in success on applications for NIH grants.

NIH created the ECR Program after a disturbing 2011 report found that from 2000 to 2006, African-American applicants were 10% less likely than whites to receive an R01 grant, NIH's bread-and-butter funding mechanism for academic researchers (*Science*, 19 August 2011, p. 925). The disparity persists, NIH officials told a top-level advisory council last week: A new in-house analysis of a more recent cohort of 1054 matched pairs of applicants found that African-American grant seekers were 35% less likely to be successful than whites.

Observers say one explanation could be that minority applicants are unfamiliar with how NIH study sections work. That possibility motivated officials to create the ECR Program, which allows young scientists to attend one meeting of a study section in their field of expertise. (Regular members serve 4-year terms on one of the 150 study sections, which meet three times a year.) They rate up to four proposals and join in the discussion of all applications.

Being part of the review process can be an eye-opener, senior scientists say. "One of the best education experiences for me as a junior investigator learning how to write a successful grant was being on a study section," notes advisory council member Deborah Griffith, a biomedical engineer at the Massachusetts Institute of Technology in Cambridge.

New data presented to the advisory panel by Richard Nakamura, director of NIH's Center for Scientific Review in Bethesda, Maryland, which runs the program and oversees the peer-review process, support that idea. He said ECR alumni have been more than twice as successful as the typical new investigator in winning an R01 grant. But Nakamura adds an important caveat: The pool of successful ECR alumni includes those who revised their application, sometimes more than once, after getting feedback on a declined proposal. That extra step greatly improves the odds of winning a grant. In contrast, the researchers in the comparison group hadn't gone through the resubmission process.

It's also hard to interpret the fact that 18% of the successful ECRs were underrepresented minorities because NIH did not report the fraction of minorities among ECR alumni applicants. So it is not clear whether African-Americans participating in the program did any better than the cohort as a whole—suggesting that the program might begin to close the racial gap—or better than a comparable group of minority scientists who were not ECR alumni.

The program has attracted many fewer underrepresented minorities than diversity advocates had hoped when it was launched. Minorities comprise only 13% of the roughly 5100 researchers accepted into the program (6% African-American and 7% Hispanic), a percentage that roughly matches their current representation on study sections.

Nakamura says NIH has had a hard time finding minority candidates who meet the eligibility requirements—being a senior author on two recent peer-reviewed papers and a full-time faculty member for 2 years—and who want to participate. One-quarter of researchers in ECR's first cohort were from minority groups, he notes. "But as we've gone along, there are fewer underrepresented minorities coming into the pool."

Meanwhile, interest remains high among white and Asian scientists, who account for roughly 80% of the ECRs. To cope with the high demand for limited slots—each study section is allowed only one ECR scientist—NIH decided last year to exclude scientists who had already received an R01.

Serving on a study section "was a great experience," says Blake Riggs, an associate professor of cell biology at San Francisco State University in California and one of the first scientists to be chosen for the program. But Riggs, the only African-American in his department, thinks the program is too brief to help minority scientists truly become part of the mainstream, and may even exacerbate their sense of being marginalized.

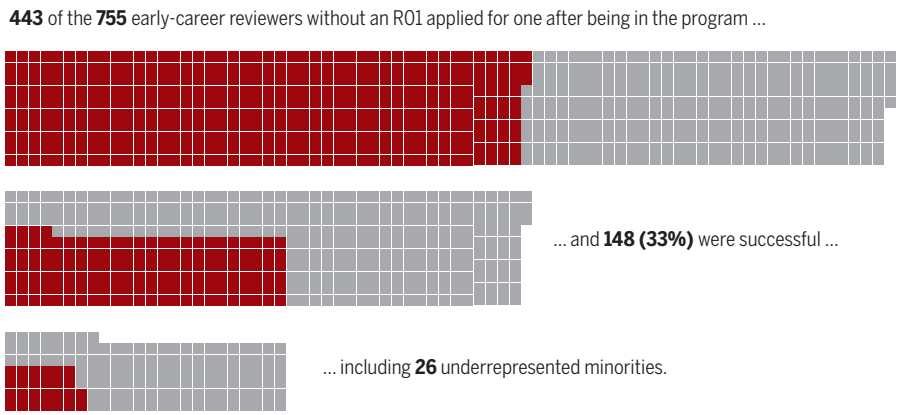
"After I sat on the panel, I realized there was a real network that exists, and I wasn't part of that network," he says. "My comments as a reviewer weren't taken as seriously. And the people who serve on these panels get really nervous about having people … that they don't know, or who they think are not qualified, or who are not part of the establishment."

If NIH "wants this to be real," Riggs suggests having early-career researchers "serve as an ECR and then call them back in 2 years and have them serve a full cycle. I would have loved to do that."

But Nakamura worries that asking minority scientists to play a bigger role in NIH's grantsmaking process could distract them from building up their lab, finding stable funding, and earning tenure. Serving on a study section, he says, means that "those individuals will have less time to write applications. So we need to strike the right balance." ■

Gaining an edge

Preliminary data show that young scientists who have sat in on a National Institutes of Health study section do better than their peers in subsequent competitions for grants.



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Jeffrey Mervis (June 16, 2016)
Science **352** (6292), 1379. [doi: 10.1126/science.352.6292.1379]

Editor's Summary

Science (print ISSN 0036-8075; online ISSN 1095-9203) is published weekly, except the last week in December, by the American Association for the Advancement of Science, 1200 New York Avenue NW, Washington, DC 20005.