

Alternative Grant Funding Models Might Perpetuate Black-White Funding Gaps

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The White Coats for Black Lives and #ShutDownSTEM movements have galvanized biomedical practitioners and researchers to eliminate institutional and systematic racism, including barriers faced by Black researchers in biomedicine and science, technology, engineering, and mathematics. In our recent study on Black-white funding gaps for National Institutes of Health Research Project grants, we found that the overall award rate for Black applicants is 55% of that for white applicants¹. How can systems for allocating research grant funding be made more fair while improving its efficiency?

Some have argued for funding proposals by partial lottery: winners are chosen randomly among applications that pass a round of peer review designed to cull the weakest proposals². The hope is that this approach would “eliminate or at least alleviate” bias² (p. 4). Our view is that lotteries can still unintentionally perpetuate significant racial disparities. Our work finds Black-white disparities even in the preliminary criterion scores for Significance, Investigator, Innovation, Approach, and Environment, which explain disparities in preliminary overall impact scores². These overall scores determine which proposals are dropped before panel discussion, “the decision point that makes the largest single contribution to the funding gap”³ (p. 6). Thus, analogous to troubled, ostensibly race-blind recidivism prediction algorithms⁴, lottery processes that ignore race can nevertheless reflect racial disparities from previous decisions and criteria.

As an alternative to a lottery, some have proposed using retrospective evaluations of a researcher’s track record to determine funding. Under Ioannidis and Khoury’s approach⁵, scientists would be evaluated by their performance along multiple metrics, including high publication productivity for previously funded projects and top-cited papers. However, Ginther and colleagues demonstrate that both new and experienced Black grant applicants have fewer publications and citations than their white peers⁶. Similar to the lottery approach, tying funding

to publication productivity and citation rates can result in disparate funding outcomes by failing to account for prior inequalities.

In the absence of an easy solution that would make grant allocation fair, it is crucial to continuously evaluate any grant award process with new findings about social disparities in science's interwoven reward systems. Future proposals for alternative models as well as any future modifications to NIH's review criteria⁷ should explicitly consider these challenges to support Black scientists' careers and research.

References:

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