

# Study suggests women in biomedical sciences have equal chance of success in sustaining grant funding

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A team of researchers at the National Institutes of Health has found that women in biomedical sciences are just as successful as men in sustaining

grant funding. In their paper published in *Proceedings of the National Academy of Sciences*, the group describes their study of grant approval rates for men and women in the biomedical sciences.

Prior research has shown that despite receiving approximately half of all advanced degrees in the biomedical sciences, [women](#) are still vastly underrepresented in tenured positions at major universities. It has been suggested by some in the field that part of the reason for this disparity is the view held by many women who pursue advanced degrees that they will have limited opportunities should they pursue an academic career path. The [researchers](#) note that such a path generally involves becoming successful at applying for grants to carry out research. The researchers further suggest that many women believe this path is biased against women and thus choose to pursue careers in the corporate world as a more viable alternative. But are such beliefs justified? That is what the researchers sought to learn.

To find out, the researchers ran queries on databases maintained by NIH that hold information regarding grants for the years 1991 through 2010. In so doing, they compared rates of success for first-time applicants as well as for those who apply for and receive grants repeatedly. They found that male first-time applicants far outnumbered female first-time applicants. But they also found that the rates of success for women who applied for and received grants repeatedly were much closer. And when they compared [success](#) rates by age and amount of education, they found that the rates were nearly identical for the two genders. The researchers suggest that this indicates that the so-called "leaky pipeline" is not applicable to women in the biomedical sciences. They further suggest that there is a degree of misinformation surrounding opportunities for women in the [biomedical sciences](#) and that more needs to be done to counteract it.

**More information:** Lisa A. Hechtman et al. NIH funding longevity by

gender, *Proceedings of the National Academy of Sciences* (2018). [DOI: 10.1073/pnas.1800615115](https://doi.org/10.1073/pnas.1800615115)

## **Abstract**

Women have achieved parity with men among biomedical science degree holders but remain underrepresented in academic positions. The National Institutes of Health (NIH)—the world's largest public funder of biomedical research—receives less than one-third of its new grant applications from women. Correspondingly, women compose less than one-third of NIH research grantees, even though they are as successful as men in obtaining first-time grants. Our study examined women's and men's NIH funding trajectories over time ( $n = 34,770$ ), exploring whether women remain funded at the same rate as men after receiving their first major research grants. A survival analysis demonstrated a slightly lower funding longevity for women. We next examined gender differences in application, review, and funding outcomes. Women individually held fewer grants, submitted fewer applications, and were less successful in renewing grants—factors that could lead to gender differences in funding longevity. Finally, two adjusted survival models that account for initial investigator characteristics or subsequent application behavior showed no gender differences, suggesting that the small observed longevity differences are affected by both sets of factors. Overall, given men's and women's generally comparable funding longevities, the data contradict the common assumption that women experience accelerated attrition compared with men across all career stages. Women's likelihood of sustaining NIH funding may be better than commonly perceived. This suggests a need to explore women's underrepresentation among initial NIH grantees, as well as their lower rates of new and renewal application submissions.

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