

Coalition seeks to increase transparency on life science career prospects

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Credit: Petr Kratochvil/Public Domain

Nine U.S. research universities and a major cancer institute today announced plans to give would-be life scientists clear, standardized data on graduate school admissions, education and training opportunities, and career prospects.

The institutions formed the Coalition for Next Generation Life Science

in response to the focus of many new Ph.D.s. solely on a limited number of traditional faculty positions and to the lack of good marketplace information on training and [career](#) options for talented life scientists.

The presidents and chancellors of the founding institutions announced the initiative in a joint article published in the Dec. 15 issue of the journal *Science*. They said they would begin posting informative new standardized data on institutional websites in February 2018 and add additional categories of information over the following 18 months.

"In the absence of such information, students are prevented from making informed choices about their pre- and postdoctoral training activities, and universities from preparing trainees for a full range of careers," the presidents and chancellors wrote in the *Science* article.

The authors of the piece are Martha E. Pollack, president, Cornell University; Vincent Price, president, Duke University; Gary Gilliland, president, the Fred Hutchinson Cancer Research Center; Ronald J. Daniels, president, the Johns Hopkins University; L. Rafael Reif, president, the Massachusetts Institute of Technology; Samuel Hawgood, chancellor, the University of California, San Francisco; Freeman A. Hrabowski, president, the University of Maryland, Baltimore County; Mark S. Schlissel, president, the University of Michigan, Ann Arbor; Amy Gutmann, [president](#), the University of Pennsylvania; and Rebecca Blank, chancellor, the University of Wisconsin-Madison.

Their article cited studies showing that only about 10 percent of U.S. biomedical scientists land tenure-track faculty positions at U.S. institutions within five years of their Ph.D. graduation. Among the constraints on the academic job market, the article said, are a nearly 20 percent decline in inflation-adjusted federal research funding from 2003 to 2016. That decline limits hiring by universities and other nonprofit research institutions that receive federal research support.

The coalition members will issue statistical reports with information on:

- Admission to and enrollment in doctoral programs in the [life sciences](#),
- The median time spent in graduate school before earning a doctorate,
- The demographics of graduate students and postdoctoral fellows by gender, underrepresented minority status and citizenship,
- The median time spent in postdoctoral fellowships (the apprenticeships many scientists serve immediately after [graduate school](#) but before landing a permanent position), and
- The jobs held by an institution's former graduate students and postdoctoral fellows.

The dearth of [faculty positions](#) in the life sciences is no secret and many postdoctoral trainees are aware of the odds against them when they search for traditional university jobs, the Science article said. The co-authors wrote, however, that students and trainees would benefit from appreciating the odds much sooner. They also would be helped by knowing more about the range of options for trained life scientists, such as careers in industry, entrepreneurship, government and [science](#) communication.

"The majority of trainees will eventually choose to pursue those careers, but only after having made irreversible investments in what is often more than a decade in training for academic jobs that do not exist," the presidents and chancellors wrote. "And at least some of this training activity may be unnecessary for their eventual career choices."

Some relevant data are available now, but for a small number of institutions and in formats that do not allow for easy comparison. Comprehensive data in a form standardized across institutions should be a major help, the presidents and chancellors wrote.

"Open data will allow students and postdoctoral fellows to understand fully the range of likely outcomes of their eventual training and career choices," they wrote. "It will help universities to better target their programs to actual career outcomes. ... And it can help to hold universities and other research institutions to account for their success in training and placing graduate students.

"Each of these measures," the co-authors wrote, "is directed at the cardinal goal of making advanced training in the life sciences more efficient and humane."

Each coalition member, the writers said, has also agreed to help graduate students and fellows better explore alternative career paths, improve mentoring, and work to improve diversity in the life sciences workforce. They said they hope other institutions will join the original 10 in the movement for transparency in biomedical career data.

More information: R. Blank at University of Wisconsin, Madison in Madison, WI et al., "A new data effort to inform career choices in biomedicine," *Science* (2017). [science.sciencemag.org/cgi/doi ... 1126/science.aar4638](https://science.sciencemag.org/cgi/doi/10.1126/science.aar4638)

Provided by Johns Hopkins University

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