Where U.S. science has been hit hardest after Trump's first year

The Trump administration has slashed the number of grants from the National Institutes of Health, with far fewer focused on women, cancer and mental health.

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By Carolyn Y. Johnson, Lydia Sidhom and Susan Svrluga

Every night, Katherine Burns wakes up in a sweat. It feels like the world is closing in on her.
Burns, 47, runs a laboratory at the University of Cincinnati College of Medicine focused on endometriosis, a stigmatized, poorly understood gynecologic disease. She's not just intrigued by the complex interplay of the immune system and hormones that drive endometriosis but is one of the millions of American women who have it, suffering years of misdiagnosis, blackout levels of pain and infertility.

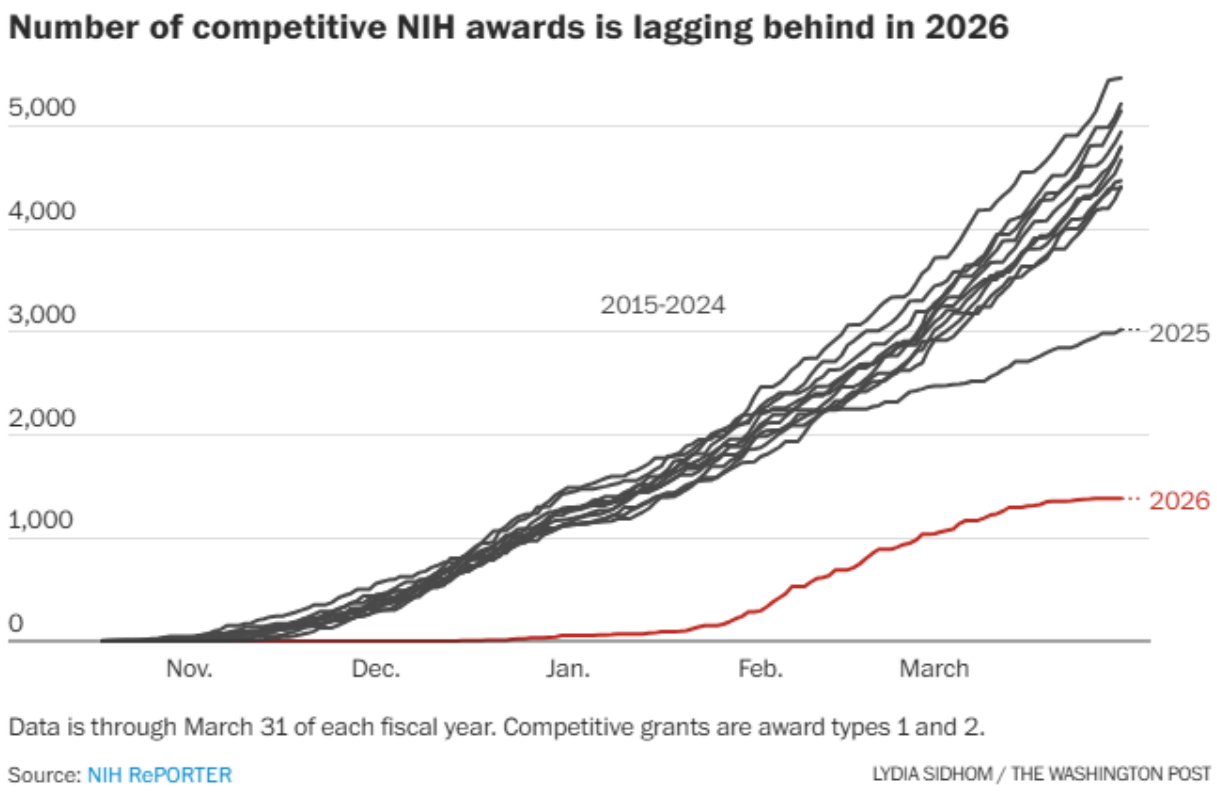
She's haunted by a terrifying prospect: the end of her research.

President Donald Trump's administration rocked the American research enterprise over the last year with disruptions and changes to the historically reliable stream of federal funding that fueled its science preeminence. While courts and Congress have stopped some of the harshest cuts, fewer projects are moving forward. Labs such as the one Burns leads are running on fumes.

American science is shrinking.

A Washington Post analysis found that through March 31, halfway through this fiscal year, the number of competitive grants awarded by the National Institutes of Health is down by more than half compared with the same period last year. Biomedical funding has also undergone a shift, the analysis found, cutting the U.S. research footprint across nearly every major disease area — including fewer grants focused on women's health, cancer and mental health.

Overall, the NIH supported over 2,700 fewer scientific projects in fiscal 2025, about a 15 percent cut in the number of competitive grants compared with the previous fiscal year. In Burns's field, women's health, there was a 31 percent drop in the number of projects funded in 2025 that included the word "women," after years of steady growth in competitive awards.



“It’s very scary. It’s very hard. It’s very emotional for me because I’ve worked so very hard to get to this point,” Burns said. “I’ve worked and dedicated who I am to this because I have this disease. … We really made some strides, and we really made some sacrifices to keep this going.”

Unlike the grant terminations targeted at research that conflicted with administration priorities, such as diversity, equity and inclusion (DEI) programs, the delays and changes to federal funding are having a broader impact.

Andrew Nixon, a spokesman for the Department of Health and Human Services, said in an email that the “Democrat-led shutdown” late last year was responsible for delays and that the NIH was catching up. The Post’s analysis focused on competitive awards -- scientific projects competing for new funding — but the agency has been showcasing data that includes awards for grants that are being continued from prior years for which they are less far behind.

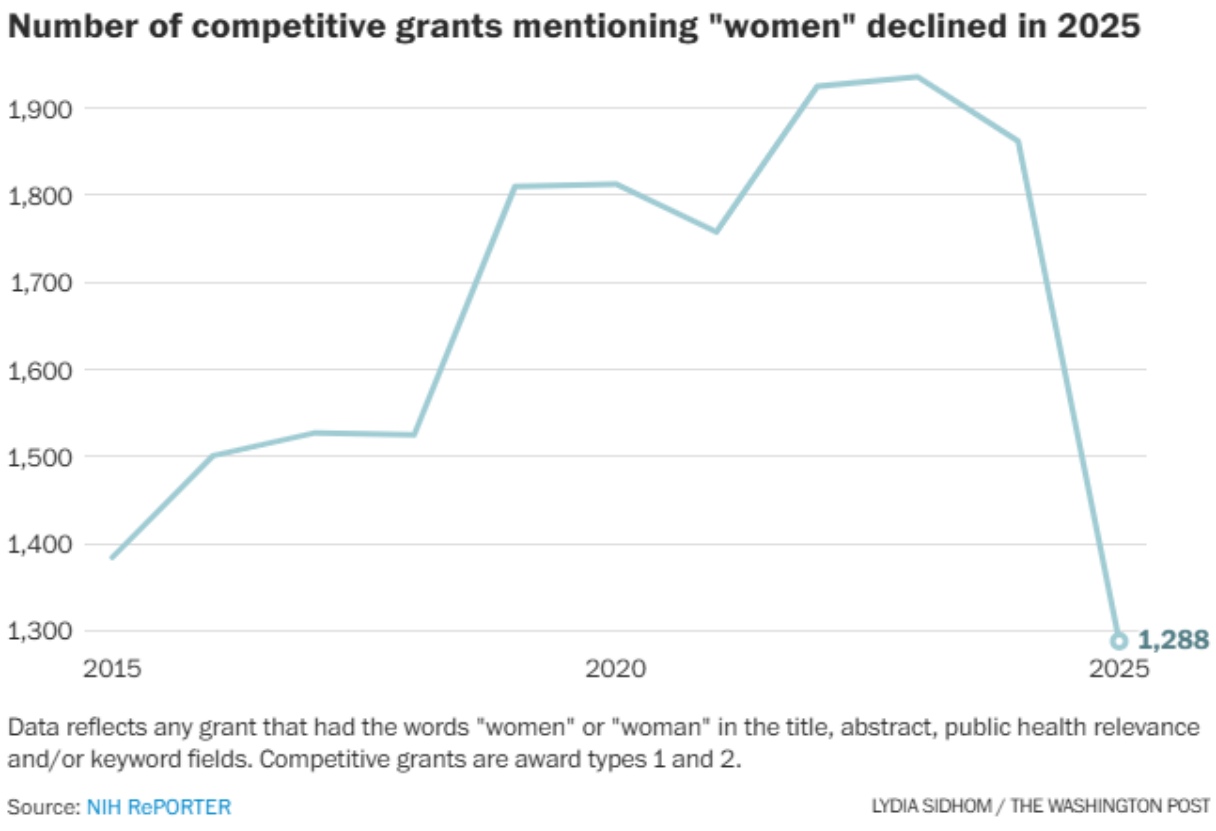
Nixon added that the shift in how grants are budgeted will help sustain long-term research. “Under this practice, researchers — especially those who are younger — will have more funding stability and early funds to build needed laboratory or other infrastructure,” Nixon said.

Last month, NIH Director Jay Bhattacharya told the House Appropriations Committee that the agency, as it did last year, would catch up and spend its entire

budget. “Scientists that are listening, don’t pay attention to the hype,” he said. “We are in the process of identifying the excellent projects. The grants are already going out the door.”

But administrators at research universities have been anxiously watching the numbers and struggling through admissions and hiring decisions that have to be made amid a host of unknowns. A large portion of grant money goes to support trainees in labs, so when funding dries up, every kind of young scientist is affected — graduate students, postdoctoral researchers, research staff, assistant professors.
At the University of Wisconsin at Madison, Anjon Audhya, the senior associate dean for basic research, biotechnology and graduate studies at the School of Medicine and Public Health, said he has been monitoring federal funding “very, very, very closely.” The university has been providing bridge funds to some labs so they don’t lose people, he added, but that stopgap can’t continue indefinitely.

That’s having a significant impact on their youngest faculty members, Audhya said; the grant success rate of early-stage investigators dropped from about 26 percent in fiscal 2024 to about 19 percent the next year — a significant loss for young scientists. And the delays this year are disrupting a system that institutions and laboratories have relied on for decades. “When we get these sort of changes that take place, it’s very anxiety-producing because it creates that uncertainty, where historically we’ve had enormous certainty,” he said.



Shrinking American science

The downsizing of American research is not happening all at once.

Many labs are dwindling by attrition. Students or postdoctoral researchers leave, and their positions aren't filled. A highly skilled technician is laid off. Many research universities are admitting fewer PhD students, narrowing the very beginning of the pipeline of new scientists.

These decisions are slower and harder to track — more like a balloon that gradually deflates and shrivels, instead of one that pops.

At Case Western Reserve University, which has made a strong push to rapidly grow its research capacity in recent years, Michael Oakes said he worries about the next generation of scientists and engineers remaining optimistic about what they can accomplish.

"My worry is faculty here or elsewhere will get dejected," said Oakes, the university's executive vice president for research and economic development.

Burns has been furiously applying for grants, making every effort to keep her lab alive, including putting her own money into supporting the science. Funding has always been hard-won, and her lab began to struggle a year and a half ago, but the system was predictable. Rejection was part of the process, but she could hone ideas, improve them and try again.

"It's only in the last year that it has really seemed to get more stringent and worse," Burns said. "It's much more daunting, because before it was almost like if you did this and this and this, you could probably get funded. … The rule book is gone."

Delays and uncertainty

The abrupt changes are hitting scientists from several directions, making it harder to plan.

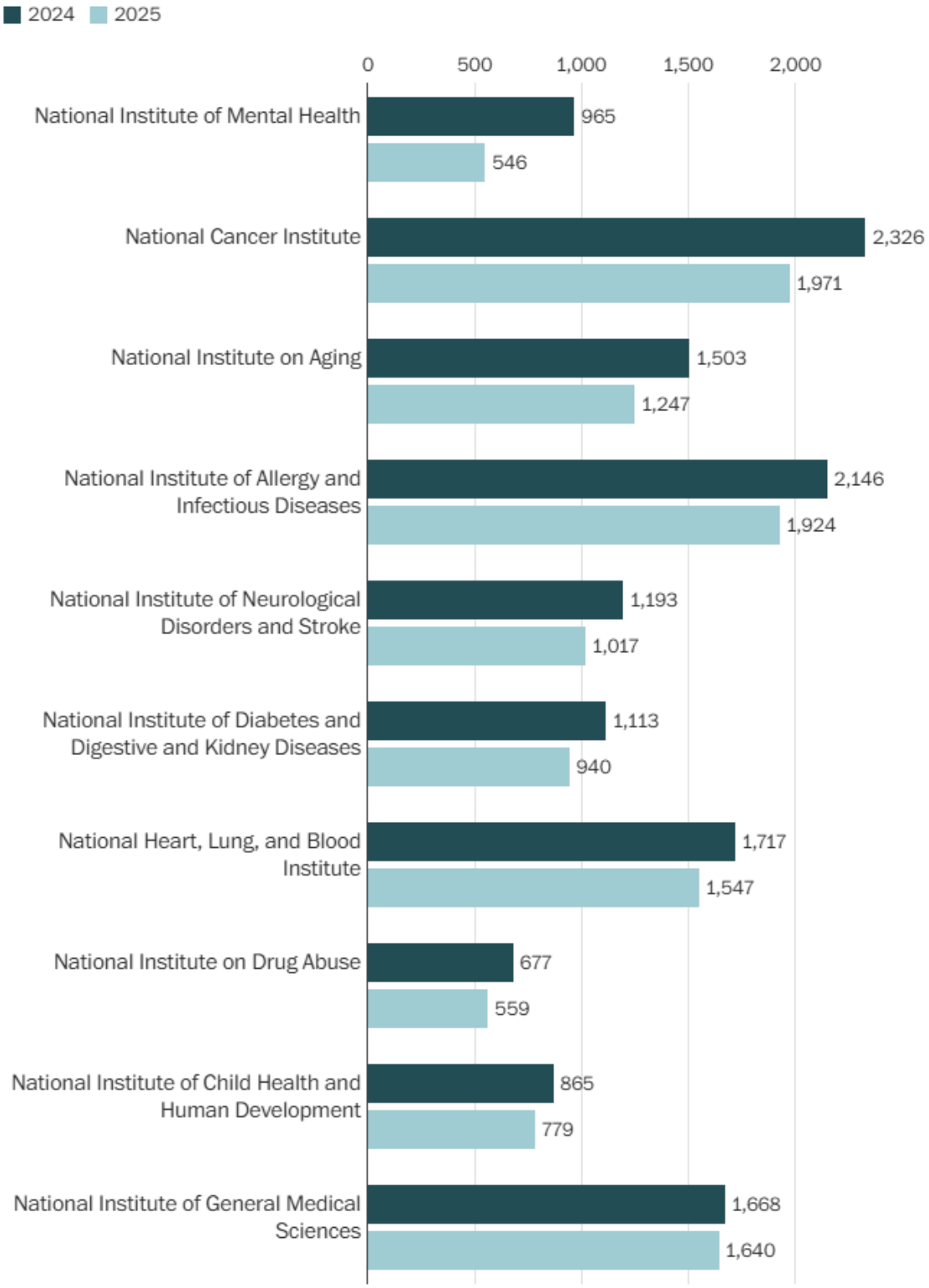
Dissatisfied with certain universities over, for instance, how they handled their DEI policies or how they treated protests against the Israel-Gaza war, the administration withheld research funding to force the institutions to change — a shock that showed how fragile this funding stream is.

Separately, the NIH has been making changes to funding policies, many of which have reasonable justifications but are being implemented in a way that amplifies ongoing uncertainty and turbulence.

One of these is a shift in its budgeting strategy that began last year. In the past, most grants would be paid out year by year. But the NIH now awards more grantees their entire multiyear budget up front, dramatically reducing the total number of grants the agency gives out during the transition.

Nixon, the HHS spokesman, pointed out that NIH spending on research project grants increased last year by 3 percent.

Number of competitive awards given to NIH institutes declined in 2025



Competitive grants are award types 1 and 2.

Source: NIH RePORTER

LYDIA SIDHOM / THE WASHINGTON POST

The agency is also eliminating “paylines,” cutoffs that previously gave scientists confidence that if their grant was rated above a certain score, they would receive funding. Paylines guide funding decisions to different degrees across the NIH and aren’t a guarantee, but they served as valuable guideposts for scientists navigating intense competition.

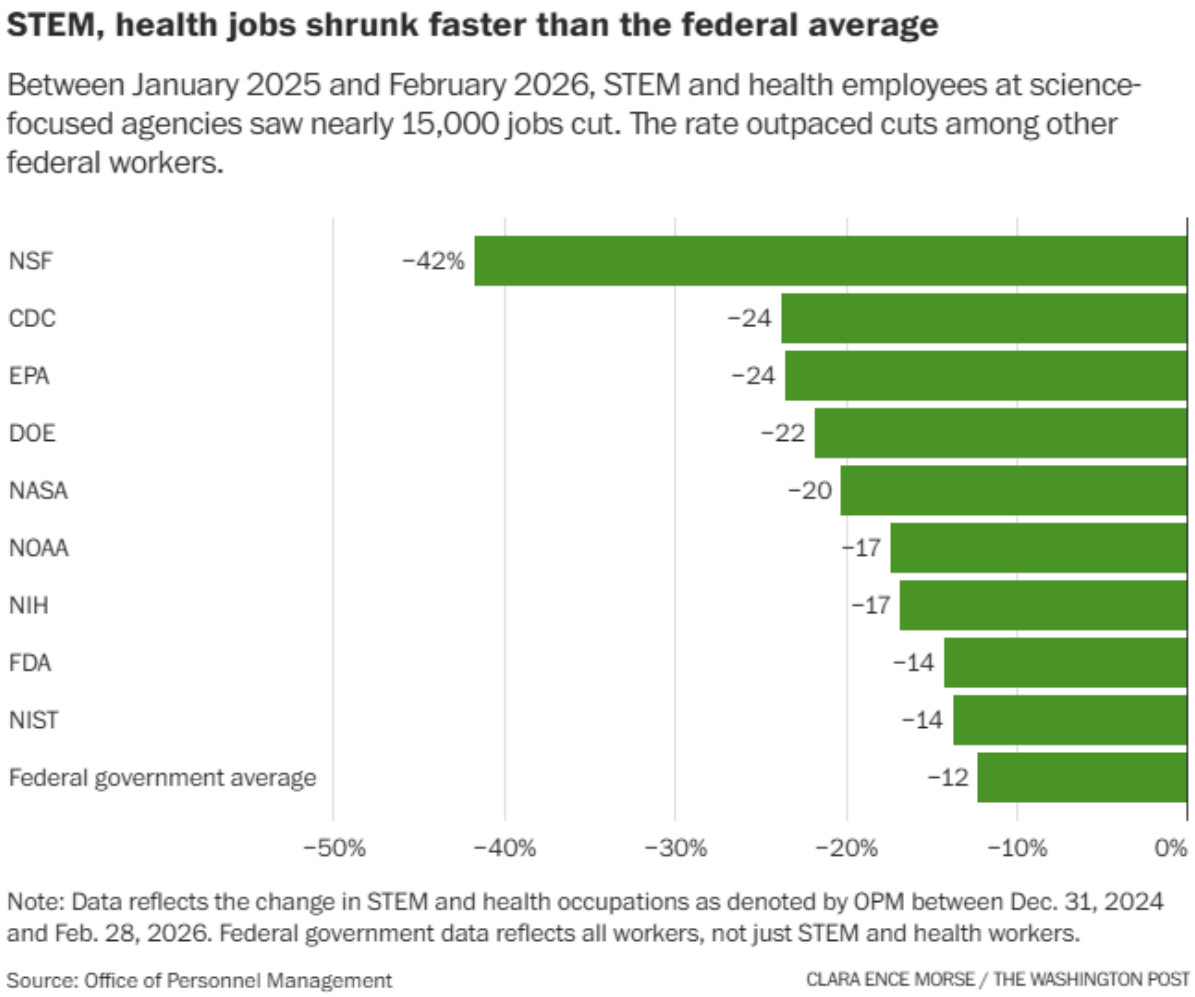
Christian Capitini, director of the University of Wisconsin’s Carbone Cancer Center, said the lack of a strict payline and program officers’ greater discretion “is certainly also introducing angst.” When there was an established payline, principal investigators could start making plans, hiring people and making purchases confident they would receive a grant— even though the funding wasn’t in hand yet. Now people are more likely to wait.

“Under the new system, NIH will consider the whole application, instead of boiling it down to a single average number that will not always be representative of scientific merit,” Nixon said. “This model is more likely to fund high risk/high reward research and will result in funding new, innovative researchers.”

In the short-term, it has made the scramble for grant funding uncertain and less transparent.

Rebecca Shansky, a neuroscientist at Northeastern University who studies sex differences in behavior and brain function, submitted a grant at the end of 2024 that got a score that was likely, though not certain, to be funded. Then the advisory council that was set to meet to make funding decisions was canceled and postponed after Trump came into office.

Many scientists’ proposals stalled, and they watched with confusion as the agency they rely on to fuel their research was hit with personnel cuts and turmoil. The Post analysis shows science agencies lost more jobs than the overall federal government average.



Shansky had to let go of one of her technicians. A student graduated, and she did not fill the position. At the end of April, she'll lose another technician. Running a lab is like operating a small business, and Shansky scrambled to bolster her budget. To save a postdoctoral researcher last year, she agreed to become the chair of the psychology department, which came with some additional funding.

"With all the delays and things, you can keep trying, but at a certain point you have to pay the people in your lab, and you have to buy things," Shansky said. "It's horrible. All the people I've been training and whose careers I feel responsible for — it's all falling apart, and it's really heartbreaking."

She just learned that another grant proposal that got a score that would have had a high probability of getting funded in past years won't go forward. If nothing else comes through this year, she's facing a grim reality.

"We're probably done," Shansky said.