

# NIH and New Drugs — New Study Says 1 in 5

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By [GoozNews](#)

For most of the past decade, Democrats and Republicans in Congress have competed over who could pour more money into the National Institutes of Health, the largest funder of biomedical research in the world.

But the party is over. The [budget cuts proposed](#) by a leading House Republican this week included cancellation of the \$1 billion that the Obama administration wanted to add to the \$31 billion NIH budget.

It was part of a broad assault on science funding that was announced by appropriations [chairman Hal Rogers](#), R-Ky., who also called for large cuts at the National Science Foundation, the White House Office of Science, the National Oceanic and Atmospheric Administration and the National Aeronautics and Space Administration.

The purpose, [according to Rogers](#), is “to rein in spending to help our economy grow and our businesses create jobs.”

If creating jobs is his goal, Rogers might want to take a look at [a new study](#) that appeared yesterday in the New England Journal of Medicine, which found that publicly-funded research is a far more important contributor to the creation of new drugs and vaccines than previously thought. The classical view of innovation is that government funds basic science, while industry comes up with the new and innovative products based on that science.

But innovation never was solely the province of private actors pursuing their self interest. And it turns out that now it is even less so. Nearly one out of every five important medical advances approved by the Food and Drug Administration between 1990 and 2007 was invented in a federally-funded

lab, according to the study, which previous estimates had put at closer to one in 15.

Moreover, those inventions, which included 40 new drugs for cancer, are currently generating in excess of \$100 billion a year in sales for drug and biotechnology firms. That's about one-sixth the total revenue for the entire global [pharmaceutical industry](#).

“These federal grants are not for product development, they're for advancing basic science,” said study author Ashley J. Stevens, a senior researcher at Boston University's School of Management. “But they happen to have both significant public health benefits as well as economic development benefits.” The transmission belt that allows transfer of government-funded inventions from grant recipients to the private sector was built in 1980 with passage of the Bayh-Dole Act, named after its two Senate sponsors, Democrat Birch Bayh of Indiana and Republican Bob Dole of Kansas. The law became a core element of the U.S. innovation system, and a major source of the U.S.'s competitive advantage in global commerce.

It allows scientists and their institutions to patent government-funded inventions and license them to the private sector. Prior to Bayh-Dole, those breakthroughs were put in the public domain, which eliminated the incentive for commercialization since no firm would invest in developing the product when another company could simply copy the invention.

In the wake of that law, the role of the public sector in spurring biomedical innovation surged, the study found. Over the past 40 years, 153 new FDA-approved drugs, vaccines or new indications for existing drugs were discovered through research carried out at public institutions with federal funding. More than half were used to treat or prevent cancer and infectious diseases, which isn't surprising since the National Cancer Institute (\$5 billion) and the National Institute for Allergy and Infectious Diseases (\$4.7 billion) are the [two largest institutes at NIH](#).

Last month, NIH [announced](#) plans to take its efforts to spur biomedical innovation to a higher level by creating a new institute specifically aimed at generating new products for industry. NIH director Francis Collins stripped

\$700 million from existing NIH science budgets to get the project up and running, and asked Secretary of Health and Human Services Kathryn Sebelius to seek an additional \$1 billion from Congress for the program.

That's wishful thinking now. The once-powerful lobbying groups that push for increased NIH funding – ranging from patient advocacy groups to university medical centers to drug and biotech firms – fear the cancellation of the president's proposed increase is just the first wave of what will shortly become a major assault on federally-funded biomedical science. "We seem to be treating defense like an entitlement while carving deeper and deeper into discretionary budgets," said Mary Woolley, president of Research America.

"Congress should definitely cut NIH spending," said Michael Cannon, a health care analyst at the libertarian Cato Institute, which backs large cuts in federal spending. "Cutting NIH spending probably would result in less innovation, but it is less clear that the benefits of those forgone innovations exceed the costs."

The chairman of Research America is former Republican Rep. John Porter of Illinois, who spent his years on Capitol Hill as the chief champion of increased NIH funding. Unfortunately for Porter and Research America, moderate Republicans like himself have gone the way of the dodo bird.

"This will undercut U.S. competitiveness in biomedical research in a very big way," Woolley said. "Other countries have learned from the U.S. that putting resources behind biomedical research will lead not only to better health outcomes but economic growth." That isn't a message with much appeal to the new House majority.

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