

Warren joins lawmakers proposing new ideas for science funding

When National Institutes of Health (NIH) director Francis Collins presented his agency's 2016 budget request to a US House of Representatives subcommittee on 3 March, he received a warm but ominous welcome. Opening the session, Representative Tom Cole, a Republican from Oklahoma, summarized the situation in carefully understated terms: "Of course we all support biomedical research. Unfortunately right now [...] given the reality of funding allocations, we might not be able to do everything that the Administration is proposing."

Collins was requesting a minuscule 3.3% increase in the NIH budget, but mushrooming spending on social programs and political paralysis may make even that figure unachievable.

Mandatory spending for government-sponsored programs such as Social Security, unemployment benefits and Medicare, as well as on interest on the national debt, now consumes about two-thirds of the nearly \$4 trillion federal budget. Such programs are expected to devour three-quarters of the budget by 2040. The rest of the government, including research agencies, subsists on the shrinking pool of discretionary funding that Congress is free to allocate as it sees fit. To increase NIH funding, Congress must raise revenues or cut other discretionary programs. Republicans reject new taxes; Democrats dislike cuts.

The impasse has sent politicians, scientists, and private organizations scrambling for other ways to pay for research.

Democratic Senator Elizabeth Warren of Massachusetts is heading one such effort. On 29 January, Warren introduced the Medical Innovation Act. The measure would force companies that have entered into settlement agreements with the Department of Justice for breaking federal laws to pay an additional 1% of their total profits for each blockbuster drug that can be traced back to government research support, for a period of five years. The supplemental payments would go directly to biomedical research rather than the general treasury, increasing science funding without requiring a new tax. If this "swear jar" had been in place over the last five years, Warren's office estimates that it would have produced about \$6 billion in additional funding for NIH annually, roughly a 20% increase in the Institutes' budget.

Warren told *Nature Medicine* that the measure "would help revitalize our nation's investment in lifesaving research, and, at the same time, strengthen accountability for big pharmaceutical companies when they break the law." The



Thinking big: Senator Elizabeth Warren sees fines as a source of research money.

Pharmaceutical Research and Manufacturers of America has expressed its distaste for the initiative, but Warren indicates that she is open to other strategies, as long as those measures also raise future research budgets. "NIH funding drives biomedical innovation and helps to train the next generation of scientists. Year after year, Congress says it supports the NIH, but continues to choke off funding that that will lead to tomorrow's cures, and that must stop," she says.

Taxing questions

Corporate tax reform might provide a more politically palatable solution. Both parties want to rewrite the tax code, cutting the overall tax rate on corporate profits while closing loopholes that currently motivate American companies to hide money overseas. Although the details are unsettled, any such measure is likely to inject an immediate bolus of funds into the treasury. Michael Lubell, professor of physics at the City College of New York and a longtime science lobbyist, wants to turn this one-time windfall—which some estimate could reach upwards of \$150 billion—into a source of sustainable research funding.

Lubell and former Congressional staffer Tom Culligan presented the idea, which they call the Research Bank, at the American Physical Society meeting in March. If the corporate tax change goes through, Culligan and Lubell want to use \$100 billion of the new money to establish the Bank, which would be managed as a public-private venture independent of Congress. Interest from the Bank's endowment

would provide billions of dollars in additional funding annually, which would be distributed through existing agencies. "We could then say to the NIH, 'send us your peer-reviewed proposals that you couldn't fund, [and] we will then take those up,'" Lubell says.

A more radical proposal, introduced in the House on 9 February by Democratic Representatives Kathy Castor of Florida and G.K. Butterfield of North Carolina, would simply move biomedical research funding into the entitlement spending category, exempting it from the wrangling over discretionary funds. "If that could be done that would be wonderful, but I think politically it's almost impossible," Lubell says.

Other research advocates hope private donors will help pick up the slack, especially in basic science. In 2013, six of the biggest science charities in the US launched the Science Philanthropy Alliance, a new collaboration seeking to bring more donors into the field. Physicist Mark Kastner, formerly the Donner Professor of Science at the Massachusetts Institute of Technology in Cambridge, Massachusetts, is moving to Palo Alto, California, to assume the presidency of the Alliance starting 15 March. "I would hope that what [philanthropy] really does is give researchers the chance to demonstrate things that are important enough that the federal government will then join in," Kastner says.

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Corrected after print 7 May 2015.

Correction

In the version of the article “Warren joins lawmakers proposing new ideas for science funding” initially published, (*Nat. Med.* **21**, 299, 2015), the legislation recently introduced by Senator Warren was oversimplified, in a manner that implied it would increase the amounts of fines paid by pharmaceutical companies via settlement agreements with the Department of Justice. Rather than directly affect these settlement amounts, the Medical Innovation Act would also force companies that have entered into settlement agreements with the Department of Justice for breaking federal laws to pay an additional 1% of their total profits for each blockbuster drug that can be traced back to government research support, for a period of five years. The supplemental payments would go directly to biomedical research rather than the general treasury, increasing science funding without requiring a new tax. The error has been corrected in the HTML and PDF versions of the article.
