

what they do best, investigating answers to our most complex medical mysteries: cancer, premature birth, heart disease, and so on. I have had these young scientists in my office talking about the fact that they may not stay with the field, a field that they love, because they can't get the grants. As we cut back, only the most experienced scientists get those grants, and they are good. But our young people may be even better, but we have got to give them a chance. We have got to give them a chance to move forward and do that.

More than 80 percent of the NIH budget goes to over 300,000 research personnel at more than 2,500 universities and research institutions throughout the United States. So that is affecting a lot more than California. It is affecting our colleagues around the country, and maybe they don't even realize what an impact that has.

In San Diego, we are fortunate. We have got a lot of researchers, a lot of scientists working hard; and they received \$1.13 billion in NIH funding in 2012. It has sparked major breakthroughs, brings jobs to the region, and creates potential breakthroughs for millions around the country.

So we are doing our part; but, tragically, the sequestration requires NIH to cut 5 percent, or \$1.55 billion, of its fiscal year 2013 budget. NIH must apply the cut evenly across the board, the way things are today. That is why we have to change that. I hope we will be able to do that. NIH must apply the cut evenly across all programs, projects, and activities which are primarily NIH institutes and centers. This means that every area of medical research will be affected by that. Every area. Not just the few that maybe we think don't need the help, but every area. This is an irrational, backwards-thinking policy that will harm millions of Americans—current patients and future ones—and cost us millions in economic output.

As a result of the sequester and the slashing of NIH funding, already approximately 640 fewer competitive research project grants will be issued from what we have already done; approximately 750 fewer new patients admitted to the NIH Clinical Center; no increase in stipends for National Research Service Award recipients in 2013; and a delay in medical progress.

You know, these medical breakthroughs that we have that benefit many of our patients, many of our constituents—and I know I have friends who have been the beneficiaries of some of those breakthroughs—they just don't happen overnight. In almost all instances, those discoveries result from years of incremental research to understand how diseases start and progress. Even after the cause and the potential drug target of disease is discovered, it takes an average of 13 years and \$1 billion to develop a treatment for that target.

And what is difficult is that we know that a lot of people are waiting for

some of those clinical trials because you have to be careful how that is done, and that takes time. It takes enough patience, enough people willing to take that risk so that we can see what happens over time. That is so important. And when we start breaking this up, the whole process doesn't work.

Cuts to research are delaying progress in medical breakthroughs, including development of better cancer drugs that zero in on a tumor with fewer side effects; research on a universal flu vaccine that could fight every strain of influenza without even needing a yearly shot; and the prevention of debilitating chronic conditions that are costly to society and delay development of more effective treatments for common and rare diseases affecting millions of Americans.

And, as I mentioned earlier, we lose the promising, accomplished scientists and researchers who are leaving the industry because of the loss or inability to get grants.

We see that faculty at top universities across the country are reporting cutting labor spending by 7 percent and operating with skeleton staffs, severely limiting job opportunities for new researchers. Over 50 percent of scientists surveyed by the American Society for Biochemistry and Molecular Biology said they had a colleague who has lost his job or expects to soon. Some of the scientists are not coming back. They are going elsewhere. They are going to those areas where we are competing because they can take a more stable position outside of the research sector here in the United States.

Do we want that? I don't think so. Quite simply, we are inflicting decades of damage with the sequester policy that we have, and I hope that that is going to change. It is not rational to do that. It is cruel. It is backwards. It is insanity.

Let's join together and undo—what we can agree on in a bipartisan basis—a foolish policy with an untold number of victims from every State and every city and town in this country. Let us work together to restore NIH funding immediately.

I thank my colleague.

Ms. SPEIER. Would the gentlelady entertain a question?

You were here when then-President Bush worked in a bipartisan fashion with the House and the Senate, the Republicans and the Democrats, to double the funding for NIH; and all we have seen since then is just an absolute cliff decline in funding.

What happened then that isn't happening now? How can we reinstate that kind of bipartisan sentiment?

Mrs. DAVIS of California. Well, I think we saw the leadership coming from President Bush at that time. And because we also had—those of us here on this side of the aisle, I think, in support, it was a bipartisan effort. We saw that leadership coming from the top; and that is what made a difference, because it was written into the budget.

Now, I must say, we weren't able to sustain some of that because of a number of reasons. And we were fighting two wars and then had a number of other issues that we needed to look at. But the reality is that that was maybe unique in some ways because it really came from leadership at the top. It was here, on our side of the House, and the House was supportive. The Senate was supportive, and the President was supportive. So it was really altogether. We don't see that leadership right now from the other side of the aisle.

Ms. SPEIER. Well, I thank the gentlelady for her passionate and clear-minded commentary on how critical this is for the entire country and to all the lives that are at risk, should we not fund NIH at a level that is going to come up with the next cure, the next blockbuster drug that is going to save lives and create longevity for so many Americans.

Mrs. DAVIS of California. I thank my colleague.

Ms. SPEIER. We are joined by the Congressman from northern California, my colleague for many years, Congressman JOHN GARAMENDI, who is no stranger to this floor for Special Orders, I might add.

Mr. GARAMENDI. Representative SPEIER, thank you so very much. It is good to be on the floor. I noticed thus far it has been Californians, but this is far more than California. I see Chicago, Illinois, just arrived, and we will pick up on that.

This is an issue that touches every single American. It is not a California issue. I represent northern California, not far from the Bay Area. The University of California/Davis campus is in my area. There are major, major programs in research, not just with the National Institutes of Health and the health issues that we are talking about here, but agriculture, energy research, and on and on.

It turns out that that powerful engine of research is found in every part of America. So listen out there, those of you that are watching. This is not just a California issue. This is an American issue, and it is an international issue because this particular National Institutes of Health is dealing with the health of this entire world. Every person in the world is, in one way or another, affected by the research done by the National Institutes of Health, the funding that they, then, provide to the 250 universities all around this Nation to deal with illnesses, to deal with the human body and beyond.

For example, Davis, which was originally known as an agricultural research institution and continues to do that, has discovered that, interestingly enough, with the mad cow issue, there is a virus that can be identified specifically with that illness so that for the cattle industry, if some cow goes a little weird, you can find out whether it has mad cow disease or it is just weird. And the very same thing applies to the

human body. So this virus can be identified both in a cow—is it mad or not? Well, it may just be angry but not crazed—and in a human.

Dealing with a very, very serious human issue and also a serious economic issue for those of us in the cattle business. This is a big thing. And what has happened—I love charts.

Ms. SPEIER. As do I.

Mr. GARAMENDI. I noticed, Representative SPEIER, that you love charts too. So I borrowed this. I think you used it earlier today. This is instructive.

You were just talking with the Representative, our friend from San Diego, about the enormous increase that took place for the National Institutes of Health during the George W. Bush conservative period of time. It is right there, \$21 billion; and then over the years, it began to lose a little bit of its, I guess, interest. And then, as we went into the late years of the George Bush administration, it dropped down there. And then, of course, the great crash. A little bump here, which I think is the stimulus bill, pushing more money into research at the National Institutes of Health. And then we have seen, beginning in 2010, what has got to be one of the stupidest policies this Nation has engaged in.

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It happened to be in 2011, when the House changed from Democratic control to Republican control. We have seen a very steep decline—a \$1.5 billion reduction and annual decline in the National Institutes of Health.

This same decline in the last 3 years is what is the result of the austerity budgets that have been imposed upon us by the Republicans trying to solve the national deficit by cutting Federal expenditures. The entire European community has come to the conclusion that doesn't work. Austerity budgeting does not increase economic growth. It has caused stagnation. Certainly, in Europe we are beginning to see, I think, a large part of the slow growth in the United States caused by austerity budgets.

But specifically to the health care of Americans—our health, our well-being—this is really serious. This means people are going to have additional illnesses. You spoke earlier about some of those, like diabetes. Diabetic research funding is cut through the National Institutes of Health.

This one I really find frightening. I find this frightening because this is very personal. My mother-in-law spent the last 2 years of her life with a very, very serious case of Alzheimer's disease. She died in a hospice program in our home. We, I suppose, were a very small part of this because we took care of her. But right now we are spending \$200 billion a year dealing with Alzheimer's.

We know that the population is going to increase and the elderly population is going to skyrocket as the baby

boomers move into their later years. By 2050, it will be \$1.2 trillion for Alzheimer's.

Is there anybody in America, any family in America, that is not concerned about Alzheimer's? I don't know who they are. I know my family is concerned about it. Every family that I know—and I know many because I have been in public life for a long time and met perhaps thousands, or hundreds of thousands, of people—and every single one of them is concerned about Alzheimer's.

This is the financial side of it. The human side of it, I can tell you, is serious. I can tell you the effect it has.

Ms. SPEIER. Will the gentleman yield?

Mr. GARAMENDI. I would.

Ms. SPEIER. To your point, this \$1.2 trillion in the year 2050 is coming from all the taxpayers in this country. Because these are Medicare patients. These are Medicaid patients. What would be really stunning is to understand that if we were able to delay the onset or progression of Alzheimer's by 6 years, it could produce an annual savings of \$51 billion in 2015, \$126 billion in 2025, and a whopping \$444 billion—almost half a trillion dollars—in the year 2050, when that cost is going to skyrocket to \$1.2 trillion.

Mr. GARAMENDI. I am so glad you interrupted because that is an extremely important fact.

Let's go back and look at that. In 2015, the savings are how much?

Ms. SPEIER. They are \$51 billion.

Mr. GARAMENDI. They are \$51 billion. We are going through this budget exercise where, by the way, the sequestration cut continues, although the across-the-board is eliminated. Half of the sequestration cut will continue because of this budget, but we will be able to try to balance out the prioritization.

But the total savings in 2015 is less than the \$50 billion that you have suggested could be saved if we could extend the onset and the severity of Alzheimer's. We watched this very closely in my family. The fact of the matter is that the National Institutes of Health's funding for Alzheimer's is coming to understand the nature of Alzheimer's and, therefore, how to deal with it.

Mr. WAXMAN. I thank you for yielding. Both of you are absolutely right. It is so shortsighted to have us cut back on funding for the National Institutes of Health and their research agenda. When you make a cut in this area one year, it isn't like you can make it up the next year. Researchers go on to other fields.

It is shortsighted to make these kinds of cuts.

I also wanted to comment on the fact that every day members of the Safe Climate Caucus have come to this House floor and talked about the shortsightedness of the leadership of the House of Representatives in ignoring the science on climate change. And so every day we have had speakers—the

gentleman from California has been one of them—to just use a minute to talk about this pressing issue.

Yesterday, The Wall Street Journal reported that China has released a national blueprint for adapting to climate change. This follows the International Energy Agency's recent prediction that China will install more renewable energy over the next two decades than the U.S. and Europe combined. And China has recently implemented a series of regional cap-and-trade programs which are putting a price on carbon in China.

According to the Chinese Government—and I thank the gentleman for giving me this opportunity—climate change has already cost its people tens of billions of dollars and potentially thousands of lives. These developments in China are important because China is the world's largest emitter of carbon pollution, and we are the second largest. Our two countries need to play a leading role in addressing this global threat.

President Obama is committed to global leadership. His climate action plan calls for working with China and other nations to bend the post-2020 emissions trajectory. He is bringing in John Podesta, an experienced leader with a deep understanding of climate issues, to help him succeed.

We in the House need to stop being part of the problem and start being part of the solution. We need to start taking the climate threat seriously and work to find solutions. If China can take action on climate change, so can the U.S. If we don't, we will lose the race to develop the clean energy technologies that will power the future.

Let's not be shortsighted. Let's invest in research—research to protect our health and research to protect our planet.

I thank the gentleman.

Mr. GARAMENDI. Thank you, Mr. WAXMAN, for bringing up the leadership that China has.

I notice that the leader of our hour talked about China's leadership in another field.

Let me turn back to our leader, Representative SPEIER.

Ms. SPEIER. I just point out that China is eating our lunch, so to speak.

This is just the funding from 2012 and 2013. We referenced this earlier. And Congressman WAXMAN was talking about what they are doing relative to climate change. Look what they are doing in R&D spending in the last 2 years. It is up 15 percent. Germany, Japan, and South Korea are up 5 percent. Where is the United States, Mr. GARAMENDI?

Mr. GARAMENDI. In the red, going down.

Ms. SPEIER. That is right: a cut of 5 percent. So another example of how China is going to eclipse us in more ways than one. And those young researchers that we have been talking about are going to be going to China to do their research.

Mr. GARAMENDI. If I might just add to that, it is my understanding—and I get this from the University of California-Davis—that they are losing their new Ph.D.s to other countries, particularly to China and to India, because those countries are not only increasing their total research but they are also providing these very bright, innovative, forward-thinking Ph.D.s with a full laboratory and all of the support that they might need to continue to conduct their research not only on the issue of health care but also in all of the sciences and technologies, from high technology, energy, and so forth.

So we really need to get on it.

My final point is here twofold. First of all, if we are going to build this economy, there are five things we have to do consistently through time. And they require public investment.

First of all, education. You have got to have the best educated workforce in the world.

Secondly, you have to have the best, most advanced research because that is where the future is. That is where the future economic growth will come from.

You need to make the things that come from that. You need to have the infrastructure, and you need to think globally. We are not doing that.

The budgets that have been put forth by our colleagues on the Republican side go exactly the other direction. They cut educational funding, beginning with early childhood education. They cut the funding for research. You see it here.

Tomorrow, we are going to take up the new budget. It continues to cut research across the board, the National Institutes of Health probably included. It goes on and on. Transportation, infrastructure—forget it, there is no money for it.

We have got to turn that around. These are the fundamental investments of economic growth and, more important, social justice.

Congresswoman SPEIER, thank you so much. You have been at this, beating this drum. Don't stop. You stay with this. This is a message that the American public has to understand. These are the investments about our own personal health, our children's health, and our future economic growth, as well as addressing worldwide problems.

Thank you so very much for what you are doing here and for loaning me your charts.

Ms. SPEIER. I think the gentleman from California for lending his support and his articulation of this issue.

To his point about the jobs being lost, this year's sequester cuts were estimated to result in the loss of more than 20,000 jobs and \$3 billion in economic activity.

The three scientists who won the Nobel Prize for medicine this year for their research on how cells swap proteins all received NIH funding at some time during their careers. Nobel Prize

winner Rothman said he probably would not have started his research had NIH funding not been available.

So that, I think, speaks volumes about how important NIH funding is to young scientists.

I am now joined by my great friend, a great, passionate leader on so many issues before this House, my colleague from Illinois (Ms. SCHAKOWSKY).

Ms. SCHAKOWSKY. Thank you. I want to thank Congresswoman SPEIER for leading this really important debate.

We have been talking lately about how we are not going to be able to compete for the economic development in research and biotechnology and all the things that we do at the NIH. But I also want to show how economically—with one of your charts—it really doesn't work for us here at home as well.

Pretty much all you can see are the red lines, which are the costs every year in the United States of common diseases.

As my colleague, Congressman GARAMENDI, pointed out, we have \$203 billion a year that Alzheimer's costs our society as a whole. This is cancer, \$158 billion. We have hypertension, \$131 billion; diabetes, \$116 billion; obesity, \$109 billion; heart disease, \$95.6 billion; stroke, \$18.8 billion, Parkinson's disease, \$6 billion.

So it is really easy to see these red lines.

Teeny, tiny, and I think maybe the only one you can see here well is the amount of money that we are spending to address these diseases. NIH research funding and annual cost of care for major diseases in the U.S. is what this chart is about.

We spend \$5.5 billion on cancer research. On Alzheimer's disease it has not even been a billion dollars. It is half a billion dollars for a disease that costs \$200 billion to our economy. And on and on.

The teeny, tiny blue lines are barely very visible of how much we are actually investing in trying to deal with these diseases and diminish the tremendous costs to families and costs to government through our public health programs.

And so if we are smart investors, wise investors in how we can save ourselves money, we would put money into this kind of research.

I just want to give an example from my district of lack of being penny wise and pound foolish.

Northwestern University is developing one of the first major studies to look at the impact of contaminants from superfund sites—those are the most polluted sites in our country—on our reproductive health.

So Northwestern, which is in Evanston, Illinois, and I am proud to say in my district—a constituent of mine—proposed a study to examine the reproductive health impacts of exposure to metals, including zinc and lead, that are present in the DePue superfund site in Illinois—a very dirty site.

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Initially, in the fall of 2012, the Northwestern University Superfund Research program, led by Dr. Teresa Woodruff, was awarded a positive score with a good chance of receiving funding in response to the NIH research application. Mind you, if we had been able to research this particular Superfund contaminated site, it would have helped all over the country where we have these kinds of contaminations.

Due to limited funding—due to the sequestration—in March of 2013, Dr. Woodruff and her colleague were informally given the option to receive a reduced amount for a reduced period of time since their application was deemed, in fact, meritorious. After electing to accept the reduced funding, the NIH informed the Northwestern University Superfund Research program that, due to the sequester cuts, their project would not be funded.

This lack of funding means Dr. Woodruff and her team are unable to perform this critical research which would be helpful all over the country to help us gain a better understanding of the reproductive health risks of Superfund sites and to help us determine the best practices for the future disposal of those toxic chemicals.

We are absolutely putting hands behind our backs in order to address critical health issues that are facing our country. We are hamstringing our ability to compete globally. We are hurting the health of Americans and of future Americans in not funding the study of reproductive health. It just makes no sense. It makes absolutely no sense to cut the funding from the National Institutes of Health. It is hard to figure out what that argument would be. You certainly can't say this is frivolous spending, excessive spending.

So I really thank you for calling attention to the one of many ways that the sequester has hurt our country, but it is a very significant one. I appreciate your leadership.

Ms. SPEIER. You, too, were here in Congress during the Bush administration when there was an extraordinary increase in the budget for the NIH. The Republicans at that time recognized the value of keeping the NIH robust in the funds that it had in order for it to do cutting-edge research and move us forward.

What is it going to take? What was it like then that we don't have today that might be able to enlighten us?

Ms. SCHAKOWSKY. There was some common sense on both sides of the aisle of things that were essential investments for our country, that it made sense from every angle at which you looked at this to make those kinds of investments in the National Institutes of Health.

I think, right now, we are dealing with some of our colleagues across the aisle who believe that government spending, regardless, is not a smart investment, that the sequester cuts, which are meat-ax cuts across the