

# ISSUES

IN SCIENCE AND TECHNOLOGY

NATIONAL ACADEMIES OF SCIENCES,  
ENGINEERING, AND MEDICINE  
THE UNIVERSITY OF TEXAS AT DALLAS  
ARIZONA STATE UNIVERSITY  
WINTER 2016

## Climate and Energy: The wisdom of experience In defense of democracy The nuclear option Venture investment in fusion

# The Outliers

**Venture investment in fusion**



**Better mental health data**

**A schizophrenia gene?**

**Citizen engineers**

**Rep. Lamar Smith on research accountability**

**Global R&D for Latin America**

**How safe are e-cigarettes?**

USA \$12.00 / CAN \$13.00



0 56698 57433 0

LAMAR SMITH

## Fact Check *Scientific Research in the National Interest Act*

Since its creation in 1950, the National Science Foundation (NSF) has served a mission that helps make the United States a world leader in science and innovation. NSF invests about \$6 billion of public funds each year into research projects and related activities. In recent years, however, NSF has seemed to stray from its created purpose and has funded a number of grants that few Americans would consider to be in the national interest.

Congress has the constitutional responsibility to provide oversight of government spending. In carrying out that duty, my committee has questioned why NSF spent \$700,000 of taxpayer money on a climate change musical, \$220,000 to study animal photos in *National Geographic* magazine, or \$50,000 to study lawsuits in Peru from 1600 to 1700, among dozens of examples. There may be good justifications for such work, but NSF has an obligation to the public to provide those explanations when asked.

In July 2015, I introduced the *Scientific Research in the National Interest Act* (H.R. 3293), a bipartisan bill that ensures that the grant process at NSF is transparent and accountable to the American taxpayer, whose money funds the research the agency supports. The bill has been approved by the House Science, Space, and Technology Committee that I chair.

The *Scientific Research in the National Interest Act* seeks to hold NSF accountable for its funding decisions by requiring the agency to explain in writing and in non-technical language how each research grant awarded supports the national interest and is worthy of federal funding. The bill also sets forth that NSF grants should meet at least one of seven broad criteria to demonstrate that the grant is in the national interest. This language restores the original intent of the 1950 legislation, which requires NSF to adhere to a “national interest” certification for each grant.

Some opponents of our work to bring accountability and transparency to taxpayer-funded scientific research have spread a number of falsehoods designed to scare the scientific community into opposing the legislation. Let me set the record straight.

First, opponents claim that the bill interferes with the merit review process for approving

**The committee found that in many cases the benefits of a proposed project were not made evident in the summary or public description of the project. Our bill would require that those benefits be made clear.**

grants. False. Anyone who has taken the time to read the three-page bill will note that it clearly states, “nothing in this section [of the bill] shall be construed as altering the Foundation’s intellectual merit or broader impacts criteria for evaluating grant applications.” Since 1997, NSF has evaluated grant applications on both “intellectual merit” and “broader societal impact” criteria when determining the worthiness of a project for federal funding. The bill does not change that process.

What our proposal *does* do is ensure that the results of the peer review process are transparent and that the “broader societal impact” of the research is better communicated to the public. Over the past two years, House Science Committee staff have reviewed numerous NSF grants. The committee found that in many cases the benefits of a proposed project were not made evident in the summary or public description of the project. Our bill would require that those benefits be made clear.

A second falsehood being spread to scare scientists is that the legislation means that research projects will be judged by the title as to whether or not they are worthy of federal funding. Again, false. The bill actually helps correct a past problem with some NSF funded grants. Often the title and an incomprehensible summary were all that was publicly available about a research grant, which has left it open to criticism.

For example, a grant titled “Accuracy in the Cross-Cultural Understanding of Others’ Emotions” is a project with a head-scratching title. But it turns out the research is intended to help American soldiers better identify potential security threats. That certainly seems worthy of federal funding and the *National Interest* bill would help ensure such a project’s benefits were better communicated to earn the public’s support and trust. Researchers should embrace the opportunity to better explain to the American people the potential value of their work.

Finally, opponents claim that the bill discourages

high-risk, high-reward research. False. I can think of nothing more worthy of federal funding or more in the national interest than research with the potential to be groundbreaking. Research that has the potential to address some of society’s greatest challenges is what NSF should be funding. Improving cybersecurity, discovering new energy sources, and creating new advanced materials are just some of the ways that NSF-funded research can help create millions of new jobs and transform society in a positive way.

On the other hand, how is spending \$700,000 on a climate change musical encouraging transformative research? What is high-risk, high-reward about spending \$340,000 to study early human-set fires in New Zealand? What is groundbreaking about spending \$487,000 to study the Icelandic textile industry during the Viking era? There may well be good answers to those questions, but we weren’t able to come up with them. When NSF funds projects that don’t meet such standards, there is less money to support scientific research that keeps our country at the forefront of innovation.

Finally, some critics say the bill attempts to solve a problem that doesn’t exist. False. In January 2015, NSF director France Córdova began to implement new internal policies that acknowledged the need for NSF to communicate about the research projects it funds and how they are in the national interest clearly and in non-technical terms. She testified before the Science Committee earlier this year saying that the *Research in the National Interest Act* is compatible and consistent with the new NSF policy.

Dr. Córdova is challenging the agency to become more transparent and accountable to the American public. My bill seeks to ensure that the policy outlasts the current administration and helps maintain taxpayer support for basic scientific research.

Today, NSF is able to fund only one out of every five proposals submitted by scientists and research institutions. With a national debt that exceeds \$18 trillion and continues to climb by hundreds of billions of dollars each year, taxpayers cannot afford to fund every research proposal, much less frivolous ones.

We owe it to American taxpayers and the scientific community to ensure that every grant funded is worthy and in the national interest.

*Rep. Lamar Smith (R-TX) chairs the House Committee on Science, Space, and Technology.*