



# Age of OPPORTUNITY



**ASBMB**  
American Society for Biochemistry and Molecular Biology



@ASBMB



facebook.com/asbmb

[publicaffairs@asbmb.org](mailto:publicaffairs@asbmb.org)



# Building a Sustainable Biomedical Research Enterprise

Today's American biomedical research enterprise is out of balance, placing the United States at risk for losing global leadership status in innovation, as well as failing to protect the health of the U.S. population. Funding for the enterprise has stagnated over the past ten years and took a significant hit with sequestration in 2013. Foreign-born students come to American universities to learn how to conduct world-class research, and then they return to their home country preventing the American taxpayer from recouping their investment. And politicization of the American scientific endeavor threatens the very foundations upon which this highly successful enterprise operates.

The American Society for Biochemistry and Molecular Biology's legislative agenda addresses all of these problems and will move the entire enterprise onto a more sustainable path. To maintain our position as a global leader in research, Congress should pass legislation that ensures foreign-born, American-trained students can stay in this country to conduct research, make discoveries and create jobs in the U.S. To ensure the research enterprise is operating at peak efficiency, Congress should oppose legislation that hinders scientists' participation at conferences or alters the methods by which research grants are awarded. And of course, to support the enterprise in its current form and allow a smooth transition to a path of sustainability, Congress must increase the budgets of science funding agencies such as the National Institutes of Health and the National Science Foundation. These changes will ensure the American biomedical research enterprise is making exciting discoveries, creating jobs and continuing to drive the U.S. economy into the future.



# Protect American Innovators by Promoting an Environment Supportive of Discovery

## ISSUE:

Academic labs are the small businesses of scientific research. Grants from federal science funding agencies allow labs to hire highly skilled scientists and engineers who conduct groundbreaking research, thereby providing the seed material for companies to develop new technologies and therapies. However, sequestration and the stagnant federal research budget threaten this model. Most researchers receive less grant funding now than they did as recently as three years ago. This drain of grant funds significantly hinders the small businesses of scientific research, which affect tech companies and the overall U.S. economy. We can do more to serve the scientific community by enacting policies which help researchers.

## RECOMMENDATIONS:

-  Tax credits are useful incentives for businesses to fund and conduct research. The R&D tax credit was introduced in the 1980s and has been renewed nearly every year since then. Making this tax credit permanent would provide stability to research companies that rely on this credit to conduct important research. **ASBMB supports efforts to renew the R&D tax credit and to make it permanent.**
-  Merit-based peer review is essential to the funding only the scientific endeavors that are of the highest quality. While the system can be improved, congressional micromanagement of the peer-review process would undermine scientific agencies' ability to fund the most meritorious science. **ASBMB opposes efforts to place congressionally mandated restrictions on the types of scientific research that can be funded by the government.**
-  Due to scandals at various federal agencies regarding excessive spending on travel and conferences, Congress has reacted by proposing legislation that would restrict travel by federal employees to conferences and meetings. This would adversely affect the entire scientific community as federal scientists and administrators are crucial components of the research enterprise. Their participation at meetings spreads scientific knowledge and helps scientists improve their understanding of breakthroughs in their respective fields.
-  Tech transfer is an essential aspect of moving discoveries from academia to industry, and this is a critical point in the discovery pipeline. From time to time, an astute member of Congress with knowledge of the pipeline will propose legislation that aims to study or alter the tech transfer process.



# Enact Policies That Strengthen the American Scientific Workforce

## ISSUE:

Scientific research is a global enterprise. However, over the past three years, most countries have increased their investments in research, while the U.S. has reduced its investments. When asked about our global competitors, 85 percent of respondents in an ASBMB survey said reduced federal investments have allowed other nations to catch and pass the U.S. in scientific research. Furthermore, nearly one in five survey respondents said they were considering moving to another country to continue their scientific career. Thus the federal governments investment in training of young scientists would be undermined as foreign born trainees could return to their countries and compete against American scientists for the breakthroughs of tomorrow.

## RECOMMENDATIONS:

 Attracting and retaining smart people motivated to conduct biomedical research is beneficial to the U.S. Immigration reform with regard to science, technology, engineering, and mathematics (STEM) typically means expanding the pool of visas available to foreign scientists to study and work in the United States. Additionally, this entails reforms that would encourage foreign-born students who graduate with advanced degrees from American universities to stay in the United States as opposed to returning to their home country to compete against those in the U.S. **The ASBMB supports the passage of a comprehensive immigration reform bill.**

 Educational programs aimed at K-12 schools and colleges and universities are essential to encouraging young students to pursue STEM degrees. STEM careers tend to have higher wages, are in demand due to a growing technology sector, and drive innovation that improves the economy. **The ASBMB supports the variety of bills that would enhance the American STEM education system.**

 The American scientific enterprise functions at its best with smart people from different backgrounds asking intelligent questions about important topics. Women and underrepresented minorities are more likely to leave the research enterprise due to unintended bias and lack of a support system. To ensure that American science is always conducted at the highest caliber, we should work to recruit and retain talented scientists regardless of race or gender.



# Provide A Predictable and Sustainable Funding Environment for Biomedical Research

## ISSUE:

The United States' scientific research enterprise has propelled Americans to the moon, launched the Internet and sequenced the human genome. The vibrant culture of freedom and curiosity that abounds in the U.S. has produced astounding breakthroughs in every field of science, from astrophysics to zoology. A strong, sustained federal investment in scientists and the groundbreaking research they conduct has been the backbone of this enterprise.

Federal investments in biomedical research through the National Institutes of Health and the National Science Foundation have resulted in a steadily increasing life expectancy for Americans. From the invention of vaccines and the prevention of a myriad of diseases to the most recent advances in molecular medicine, federally funded biomedical research saves lives. Research that saves the lives of cancer, HIV and Alzheimer's patients; prevents heart attacks, strokes and diabetes; and treats congenital disorders, sickle-cell anemia and bacterial infections, was, at one point, funded by the federal government and conducted in American laboratories.

Over the past 10 years, the federal investment in scientific research has been stagnant and has failed to even keep pace with inflation. Furthermore, recent austerity policies such as discretionary spending caps and sequestration have eroded our ability to invest in the next generation of scientists to carry out the groundbreaking research for which the U.S. is known. These trends must be reversed in order for American scientists to continue to make the discoveries that improve our lives and strengthen our economy.

## RECOMMENDATIONS:

-  Increase federal investments in scientific research and development, including **increasing funding for the NIH for FY16 to \$32 billion, and to the NSF for FY16 to \$7.6 billion**. Such increases would put these agencies on a path to recover from sequester cuts, and increase the number of grants and scientists funded.
-  Repeal austerity measures put in place – including a repeal of the Budget Control Act spending caps, and sequester – allowing Congress to fund defense and non-defense discretionary programs at appropriate levels, without arbitrary and unnecessary mechanisms of restraint.
-  Members of Congress often propose legislation focusing on a specific symptom, disease or disorder. Most of the legislation affects the function of the National Institutes of Health and the Centers for Disease Control and Prevention. The purpose of these pieces of legislation is to direct more funding for research into these diseases and disorders, and often to raise awareness of the disease or disorder and better track them throughout the nation. **ASBMB opposes all directed-research legislation** and would rather let scientists determine the best course of action with their research, and to win grants based on exemplary, peer-reviewed applications.