The American Physiological Society
Statement on FY 2015 Funding for the National Institutes of Health

The American Physiological Society (APS) thanks the subcommittee for its ongoing support of the National Institutes of Health (NIH). Research carried out by the NIH contributes to our understanding of health and disease, which allows all Americans to look forward to a healthier future. The APS urges you to make every effort to provide the NIH with a net funding level of $32 billion in FY 2015. This is necessary to prevent further erosion of research capacity.

Federal investment in research is critically important because breakthroughs in basic and translational research are the foundation for new drugs and therapies that help patients, fuel our economy, and provide jobs. The federal government is the primary funding source for discovery research through competitive grants awarded by the NIH. Although the private sector partners with academic researchers to develop research findings into new treatments, industry relies upon federally funded research to identify where innovation opportunities can be found. This system of public-private partnership has been critical to U.S. leadership in the biomedical sciences. However, this position of leadership is at risk as other nations, including China, increase their investments in research and development while the United States investment has lagged in recent years.

Federal research dollars also have a significant impact at the local level: Approximately 85% of the NIH budget is awarded throughout the country to researchers who use grant funds to pay research and administrative staff, purchase supplies and equipment, and cover other costs associated with their research.

NIH funds outstanding science

As a result of improved health care, Americans in the 21st century are living longer and healthier lives than ever before. However, chronic conditions such as cardiovascular disease, diabetes, respiratory illnesses, Alzheimer’s and cancer continue to inflict a heavy burden in the United States and around the world. As the U.S. population ages, the prevalence and cost of these diseases will increase exponentially. The NIH invests heavily in basic research to understand the physiological mechanisms at work in health
and disease. This knowledge is crucial to the development of safe and effective interventions and prevention strategies.

Exciting new initiatives are underway at the NIH to advance science, including the Brain Research through Advancing Innovative Neurotechnologies (“BRAIN”) initiative and the Big Data 2 Knowledge project (BD2K). The BRAIN initiative will bring together researchers from diverse disciplines to tackle major gaps in current knowledge about the brain and brain diseases. BD2K will explore ways to capitalize on the immense volume of data being created by biomedical scientists, ultimately enhancing the work of the entire community by providing new tools and resources to make better use of that data. These important projects require significant resources, and at a time of constrained budgets, that will further diminish funding for investigator-initiated grants. The NIH system of allowing investigators to develop and propose ideas which are then evaluated by their peers and selected for funding based on their merit has fostered a research enterprise that is second to none. Increasing the NIH budget to $32 billion would provide funding for large projects as described above, while also providing resources for individual scientists to pursue creative new avenues of research.

NIH nurtures the biomedical research enterprise

In addition to supporting research, the NIH must also address workforce issues to ensure that our nation’s researchers are ready to meet the challenges they will face in the future. The pressures placed on the biomedical research enterprise after years of sub-inflationary budget increases were severely compounded by sequestration cuts in FY 2013. One analysis showed that NIH supported approximately 1000 fewer investigators in FY 2013 as a result of its declining budget.1 Researchers who lose their funding face an uncertain future as there are few options to sustain their research without federal grants. Losing federal support puts at risk the investment that it took to build those programs over many years. It also means that talented individuals working in those labs will have to look elsewhere for increasingly scarce jobs. As a result of stagnant funding for NIH, scientists at all stages of their careers struggle to maintain their research programs.

Scientists in the early stages of their careers face a particular set of challenges as they work to establish themselves during a time of dwindling resources. To address some of these problems, the NIH is continuing its commitment to fund new investigators at approximately the same rate as established investigators. The NIH is also developing three new efforts to ensure a diverse and sustainable future biomedical workforce. The
National Research Mentoring Network (NRMN) and the Building Infrastructure Leading to Diversity (BUILD) initiative are complementary programs that will develop innovative new mentorship programs to engage individuals from diverse backgrounds and help them prepare to succeed in biomedical research careers. The Coordination and Evaluation Center (CEC) will play a role in coordinating and assessing NRMN and BUILD, providing program-wide goals and tools to assess progress. These efforts are critical to helping young scientists launch their careers. However, to sustain a talented workforce the NIH needs predictable and sustainable budget growth. If the current funding crisis is not resolved, the continued loss of senior researchers will begin to erode the pool of experienced mentors for early career scientists on which the BUILD and NRMN programs rely.

The NIH also uses the Institutional Development Award (IDeA) Program to broaden the geographic distribution of NIH funds by providing support to researchers and institutions in areas that have not previously received significant NIH funding. IDeA builds research capacity and improves competitiveness in those states by developing shared resources, infrastructure and expertise. Networks established through this program expand research opportunities for students and faculty at predominantly undergraduate institutions and enhance the level of science and technology knowledge of the workforce in IDeA states. The program currently serves institutions and researchers in 23 states and Puerto Rico. The APS believes this program is an important way to broaden participation in the scientific workforce.

The APS appreciates the support of the committee in continuing the Science Education Partnership Awards (SEPA) program at the NIH. This program was slated for elimination last year under the proposed consolidation of science education programs across federal agencies. The SEPA program fosters important connections between biomedical researchers and K-12 students and teachers, providing an opportunity for students at the earliest levels to learn about STEM careers. No other federal STEM program addresses biomedicine or provides this kind of outreach concerning what NIH does to promote the health of our citizens. Thus, SEPA programs promote health literacy among young individuals, who will increasingly be expected to manage their own health care. Many of the programs sponsored by SEPA, including those at the APS, disproportionately reach underrepresented and disadvantaged students. The APS believes that the SEPA program helps establish the groundwork to address issues of workforce diversity and health literacy.

The APS is a professional society dedicated to fostering research and education as well as the dissemination of scientific knowledge concerning how the organs and systems of the body work. The Society was founded in 1887 and now has more than 10,000
member physiologists. APS members conduct NIH-supported research at colleges, universities, medical schools, and other public and private research institutions across the U.S.

The APS joins the Federation of American Societies for Experimental Biology (FASEB) in urging that NIH be provided with no less than $32 billion in FY 2014.2

1 http://www.asbmb.org/asbmbtoday/201403/PresidentsMessage/
2 www.faseb.org/fundingreport