This statement is submitted to the House Appropriations Subcommittee on Labor-HHS, and Education.

The American Physiological Society Statement on FY 2010 Funding for the National Institutes of Health

The American Physiological Society (APS) thanks the Chairman and all the Members of this Subcommittee for their support for the National Institutes of Health (NIH). The funds you included in the American Recovery and Reinvestment Act of 2009 (ARRA) are providing the NIH with a substantial influx of resources at a crucial time. Several consecutive years of stagnant budget growth had been eroding the scientific capacity painstakingly built up during the doubling. The rapid distribution of ARRA funds will allow scientists to explore new avenues of promising research through the funding of additional grants, which is already building momentum and sparking excitement in the research community. The stimulus funds represent a first step toward enabling NIH to maintain and to increase employment for highly skilled workers, purchase critical equipment and supplies, and enhance research capacity at institutions across the country. However, consistent future budget growth for NIH will be necessary to sustain this momentum beyond the period of stimulus spending and prevent an abrupt halt in these new research initiatives after the ARRA. Furthermore, absent a continued increase in support for NIH, as many as 20,000 jobs created in the biomedical sciences by the stimulus money could be lost. Therefore the APS urges you to make every effort to provide the NIH with a 7% increase in FY 2010.

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 nearly 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 offers these comments on the budget recognizing both the enormous financial challenges facing our nation and the great opportunity before us to make progress against disease.

As a result of improved health care, Americans are living longer and healthier lives in the 21st century than ever before. However, diseases such as heart failure, diabetes, cancer and emerging infectious diseases such as the swine flu continue to inflict a heavy burden on our population. The NIH invests heavily in basic research to explore the mechanisms and processes of disease. This investment will result in new tools and knowledge that can be used to design novel treatments and prevention strategies.

The NIH selects and funds investigator-initiated research of only the highest scientific merit through the use of the peer review system. Among the breakthroughs in the last year:
NIH-funded researchers discovered that people with certain genetic variants are at increased risk for a stroke. This genetic link provides molecular clues to how strokes develop and also moves the field closer to personalized medicine. This work was performed by researchers who collaborated to study large populations of patients over a long period of time, and is an example of research that was supported by multiple institutes within the NIH.¹

Scientists recently discovered that adults retain brown fat, a metabolically active type of fat tissue that was previously thought to exist only in infants and children. Because brown fat burns calories and energy, there is hope that this discovery could lead to new treatments for obesity and diabetes.²

Researchers studying obesity and diet in an animal model found that chronic consumption of high levels of fructose leads to excess weight gain and molecular changes when paired with a high-fat, high-calorie diet. Understanding the physiological changes associated with the development of obesity is a first step toward the design of interventions that could prevent the serious health consequences associated with being overweight.³

Over the past several years, the Office of the Director has supplemented existing research programs with new types of awards as part of the NIH Roadmap for Medical Research. These include the New Innovator, Pioneer and Transformative Research Award Programs. Such programs support bold and creative researchers as they engage in high-risk, high-reward research, thus allowing more flexibility to explore novel ideas and challenge existing paradigms. The NIH is also using these programs as a model for distributing funds under the ARRA. The Research and Research Infrastructure "Grand Opportunities" program will fund potentially high-impact areas of science that will benefit from short term funding.

The NIH is also home to the Institutional Development Award (IDeA) Program. Established in 1993, the goal of the IDeA program is to broaden the geographic distribution of NIH funds by serving researchers and institutions in areas that have not historically received significant NIH funding. IDeA builds research capacity and improves competitiveness in those states through the development of shared resources, infrastructure and expertise. IDeA currently serves institutions and investigators in 23 states and Puerto Rico.

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. Recent data from the NIH shows that the average age of NIH supported principal investigators is now 50.8 years.⁴ This is up nearly 12 years from the average principal investigator’s age of 39.1 years in 1980. In addition, the average age at which a researcher obtains their first major research award from NIH has increased to 42.4 years. As the scientific workforce continues to age, and more researchers retire, there may be an insufficient number of young scientists who are trained to replace them. Over the last year, the NIH has put in place policies to help new investigators succeed in competing for their first major research awards. However, efforts will be successful only if funds are
available to continue to support the careers of new and young investigators beyond the period of their first grant.

The APS joins the Federation of American Societies for Experimental Biology (FASEB) and the Ad Hoc Group for Medical Research Funding in urging that NIH be provided with a 7% increase in FY 2010 to permit the agency to maintain its current wide-ranging and important research efforts.

4 http://grants.nih.gov/grants/new_investigators/resources.htm#data (accessed April 29, 2009)