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

The American Physiological Society Statement on FY 2007 Funding for the National Institutes of Health

The American Physiological Society (APS) thanks the Subcommittee for its sustained support for the National Institutes of Health (NIH). The doubling of the agency budget that took place between fiscal years 1996 and 2002 allowed the NIH to expand its efforts to address old and new challenges in biomedical science. Our nation’s investment in basic, translational, and clinical research plays an important role in the continued health and prosperity of our people. Increases in NIH funding have allowed researchers to explore scientific opportunities on an unprecedented scale. However, to build on existing knowledge and explore new areas, NIH must be able to provide research support for innovative ideas. In FY 2006 the NIH budget was cut for the first time since 1970, and the administration’s FY 2007 budget proposal would keep the agency at the same level. Taking inflation into account, the President’s budget plan represents another budget cut that will reduce the number of research grants funded. As funding falters, the best and brightest minds will turn away from careers in medical science. If NIH cannot fund new ideas, this will not only hamper efforts to find cures, it will also discourage up and coming researchers who could become the next generation of basic and clinical scientists. The APS urges you to make every effort to provide the NIH with a 5% funding increase so we can take advantage of more scientific opportunities that will lead to ways to alleviate the suffering and burdens of disease and strengthen the nation’s scientific workforce to face future challenges.
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 across the U.S. The APS offers these comments on the budget recognizing both the enormous financial challenges facing our nation and the enormous opportunities before us to make progress against disease.

NIH’s task is both to cure specific diseases and to look broadly at scientific opportunities that may help us expand our understanding of biological problems that affect health. Basic research contributes to a body of knowledge whose importance will only be determined over time. Physiology, which is the study of biological function, provides the foundation for much of the translational research that turns discoveries into therapies and prevention strategies.

One example of this is the lung disease cystic fibrosis. Over the last twenty years, the scientific community has made great leaps in understanding the role that genes play in the development of various diseases. The CFTR gene responsible for cystic fibrosis was identified in 1989. Since then, researchers have worked to gain a better understanding of what happens in the disease at the molecular level with the hope of developing a gene therapy that would prolong and improve patients’ lives. One critical question was how much of the normal gene is necessary to improve lung function. In late 2005, NIH supported researchers at the University of Iowa published the results of experiments in which they delivered healthy copies of the CFTR gene to cultured lung cells taken from cystic fibrosis patients (1). They were then able to measure whether function improved with increasing amounts of gene product. Unexpectedly, delivery of low levels of the CFTR gene was more effective than very high doses. This type of experiment provides the foundation for designing safe and effective clinical treatments.
In addition to supporting research, the NIH must also address workforce issues to be sure our nation’s researchers are ready to meet the challenges they will face in the future. Last year the NIH announced a new program to encourage clinical and translational research at universities. The new Clinical and Translational Service Awards (CTSAs) will provide a total of $30 million in FY 2006 to develop new research and training programs at academic institutions around the country. This will allow researchers to capitalize on knowledge generated from basic research through the development of clinical applications and treatments.

The NIH plays many critical roles in advancing biomedical research. It provides opportunities for individual researchers at universities and medical schools throughout the country to compete for research funds based upon the scientific merit of their ideas. NIH also carries out other functions including:

- Sponsoring research training opportunities for young scientists and physicians
- Funding major collaborative initiatives that bring together multiple institutions with diverse resources
- Providing the public with up-to-date information about the latest research on various diseases and health conditions through individual institutes and online resources such as “MedLine Plus” and ClinicalTrials.gov
- Supporting unique science education programs, particularly for underserved minority students
- Funding innovative research through the NIH Roadmap initiative

These activities are critical to moving science forward, and they are unique to the NIH. Another example is the newly developed Genes and Environment Initiative (GEI). The GEI is a
multi-institute effort to identify genetic and environmental risk factors that contribute to common diseases such as asthma, diabetes, heart disease, cancer and Alzheimer’s disease. The planned research will build on the Human Genome Project and take advantage of new technologies developed in the pursuit of basic research. With its wide range of expertise, the NIH is uniquely suited to undertake broad projects such as this.

The examples listed above represent a select few examples from the NIH’s extensive and outstanding portfolio. 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 5% funding increase in FY 2007 to permit the agency to maintain its current wide-ranging and important research efforts. This forward-looking approach to our nation’s biomedical research efforts is much to be preferred over the administration’s proposal to fund the agency at last year’s level, which would force the NIH to contract its research portfolio, thus leaving many important projects unfunded.