The American Physiological Society Statement on FY 2011 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). 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. In this testimony, APS recommends that the NIH be funded at $37 billion in FY 2011.

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.

**Momentum from ARRA should be maintained at the NIH**

The inclusion of $10.4 billion for biomedical research in the American Recovery and Reinvestment Act of 2009 (ARRA) has provided the NIH with an unprecedented opportunity to move science forward. To date, the ARRA investment has funded over 14,000 scientific projects in all 50 states.¹

Last year the NIH moved quickly to take advantage of the opportunities provided by ARRA to address important areas of scientific need. ARRA funds are already being used to support new science in high priority areas such as biomarker discovery, regenerative medicine, stem cell research and translational science through the Challenge Grant program. ARRA funds are also being used to support highly meritorious research proposals that had gone unfunded due to years of slow growth in the NIH budget. In recent years, only 1 out of every 5 proposals submitted to the NIH received funding, leaving many important research questions unexplored. The ARRA funds have allowed NIH to direct funds to some of the most interesting and important projects that were unfunded for budgetary reasons. ARRA funds will also reach the next generation of scientists through hands-on summer research experiences for approximately 5,000 undergraduates and science educators.

As a result of the ARRA investment, the NIH estimates that 50,000 jobs nationwide will be created or retained.² The widespread distribution of NIH ARRA funds has already had a direct economic impact on the research community by funding labs and projects that would otherwise have gone unfunded. However, state and local economies also stand to benefit substantially from the stimulus funds being spent by NIH researchers. A report by Families USA showed that on average in the year 2007, every dollar of NIH funding generated twice as much in state economic output.³

In order to capitalize and build on the functional capacity created through the ARRA investment, we urge Congress to make every effort to fund the NIH at a level of $37 billion in FY 2011. Funding at this level takes into account the additional ARRA funds that have been added to the
NIH budget, and allows for growth at the rate of the biomedical research and development price index (BRDPI). This will maintain the momentum created by ARRA and start the NIH on a new path of consistent and sustainable growth in future budget cycles.

**NIH funds outstanding science**

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 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 results in new tools and knowledge that can be used to design novel treatments and prevention strategies. A key example comes from the recent outbreak of H1N1 flu. From the time that the first cases of the disease emerged, it took approximately six months to develop a vaccine, identify those most at risk and begin to understand how and why the H1N1 flu strain differs from those seen in an average year. The ability to rapidly respond to this and other threats to human health is directly dependent upon maintaining a robust scientific enterprise.

Last year the Nobel Prize in Physiology or Medicine was awarded to three longtime NIH grantees. Drs. Jack Szostak, Elizabeth Blackburn and Carol Greider shared the 2009 prize for their discovery of how the tips of chromosomes are protected from degradation during cell division. Since the discovery of this fundamental cellular mechanism, researchers have been able to apply this knowledge to better understand how cells age and why they sometimes become cancerous. Collectively NIH has supported their research for more than 30 years. Three other NIH grantees won the Nobel Prize in Chemistry in 2009. Drs. Venkatraman Ramakrishnan, Thomas A. Steitz and Ada E. Yonath identified the structure of the ribosome, the molecular machinery that makes proteins in cells. NIH has supported these researchers in their work for nearly four decades.

**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 Administration’s FY 2011 budget proposal includes funding for a 6% increase in stipend levels for National Research Service Awards (NRSA). The APS applauds this proposed increase and calls on Congress to make every effort to fully fund the request.

New investigators entering the scientific workforce have frequently encountered long training periods before gaining independence and funding for their own research labs. In FY 2007, the average age of new investigators receiving their first awards from NIH rose to 42 years. To address this problem and foster the next generation of scientists, the NIH has committed to funding new investigators at approximately the same rate as established investigators. This will allow investigators to become independent and able to explore innovative ideas at an earlier stage of their careers. 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 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 funds.
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.

The APS joins the Federation of American Societies for Experimental Biology (FASEB) in
urging that NIH be provided with $37 billion in FY 2011 so that researchers can build on
the momentum and capacity created through the ARRA investment.

1 http://report.nih.gov/recovery/arragrants.cfm
2 http://report.nih.gov/PDF/Preliminary_NIHARRA_FY2009_Funding.pdf
3 http://www.familiesusa.org/assets/pdfs/global-health/in-your-own-backyard.pdf
4 http://www.nigms.nih.gov/News/Results/nobel20091005.htm
5 http://www.nigms.nih.gov/News/Results/nobel_20091007a.htm
6 http://grants.nih.gov/grants/new_investigators/index.htm