TESTIMONY ON THE FY 2009 BUDGET OF
THE NATIONAL INSTITUTES OF HEALTH
before the
Subcommittee on Labor, Health and Human Services, and Education
Committee on Appropriations
United States House of Representatives

THE HONORABLE DAVID OBEY, CHAIR
March 31, 2008

Organization: Association for Psychological Science
Witness: Amy S. Pollick, PhD, Director of Government Relations

SUMMARY OF RECOMMENDATIONS

- As a member of the Ad Hoc Group for Medical Research Funding, **APS recommends $31.1 billion for NIH in FY 2009.**

- **APS requests Committee support for behavioral and social science research and training as a core priority at NIH** in order to: better meet the Nationôs health needs, many of which are behavioral in nature; realize the exciting scientific opportunities in behavioral and social science research, and; accommodate the changing nature of science, in which new fields and new frontiers of inquiry are rapidly emerging.

- Given the critical role of basic behavioral science research and training in addressing many of the Nationôs most pressing public health needs, **we ask the Committee to ensure that the National Institute of Mental Health coordinates with other NIH Institutes to provide support for basic behavioral science research.**

- **APS encourages the Committee to review behavioral science activities at individual institutes**. Examples are provided in this testimony to illustrate the exciting and important behavioral and social science work being supported at NIH.

Mr. Chairman, Members of the Committee: My name is Dr. Amy Pollick, and I am speaking on behalf of the Association for Psychological Science. Thank you for the opportunity to provide this statement on the FY 2009 appropriations for the National Institutes of Health. As our organizationôs name indicates, APS is dedicated to all areas of scientific psychology, in research, application, teaching, and the improvement of human welfare. Our 20,000 members are scientists and educators at the Nationôs universities and colleges, conducting NIH-supported basic and applied, theoretical and clinical research. They look at such things as: the connections between emotion, stress, and biology and the impact of stress on health; they look at how children grow, learn, and develop; they use brain imaging to explore thinking and memory and other aspects of cognition; they develop ways to manage debilitating chronic conditions such as diabetes and arthritis as well as depression and other mental disorders; they look at how genes and the environment influence behavioral traits such as aggression and anxiety; and they address the behavioral aspects of smoking and drug and alcohol abuse.

As a member of the Ad Hoc Group for Medical Research Funding, APS recommends $31.1 billion for NIH in FY 2009, an increase of 6.5% over the FY 2008 appropriations level. This increase would halt the erosion of the Nationôs public health research enterprise, and help restore momentum to our efforts to improve the health and quality of life of all Americans.

Within the NIH budget, APS is particularly focused on behavioral and social science research and the central role of behavior in health. The remainder of my testimony concerns the status of those areas of research at NIH.

HEALTH AND BEHAVIOR: THE CRITICAL ROLE OF BASIC AND APPLIED PSYCHOLOGICAL RESEARCH

Behavior is a central part of health. Many leading health conditions ï such as heart disease; stroke; lung disease and certain cancers; obesity; AIDS; suicide; teen pregnancy; drug abuse and addiction; depression and other mental illnesses; neurological disorders; alcoholism; violence; injuries and accidents ï originate in behavior and can be prevented or controlled through behavior.

As just one example: stress is something we all feel in our daily lives, and we now have a growing body of research that illustrates the direct link between stress and health problems: chronic stress accelerates not only the size but also the strength of cancer tumors; mounting evidence indicates that chronic stressors weaken the immune system to the point where the heart is damaged, paving the way for cardiac disease; children who are genetically vulnerable to anxiety and who are raised by stressed parents are more likely to experience greater levels of anxiety and stress later in life; animal research has shown that stress interferes with working memory; and stressful interactions may contribute to systemic inflammation in older adults, which in turn extends negative emotion and pain over time.

None of the conditions or diseases described above can be fully understood without an awareness of the behavioral and psychological factors involved in causing, treating, and preventing them. Just as there exists a layered understanding, from basic to applied, of how molecules affect brain cancer, there is a similar spectrum for behavioral research. For example, before you address how to change attitudes and behaviors around AIDS, you need to know how attitudes develop and change in the first place. Or, to design targeted therapies for bipolar disorder, you need to know how to understand how circadian rhythms work as disruptions in sleeping patterns have been shown to worsen symptoms in bipolar patients.

Prevention and Health: Changing Behavior

In Subcommittee hearings earlier this year, Members asked health experts why Americans, who know they need to stop smoking, eat better and exercise to be healthy, continue to engage in these detrimental behaviors. As the Partnership to Fight Chronic Disease has said, it all boils down to changing behavior. In this era of flat funding for NIH and a severely restricted discretionary budget, preventive health care that has real cost offsets have received a great deal of attention. The Centers for Disease Control and Prevention has said that ñthe United States cannot effectively address escalating health care costs without addressing the problem of chronic diseases,ò and the Milken Institute estimates the annual economic impact of preventable chronic diseases on the U.S. economy to be more than $1 trillion. Fully 75% of our current healthcare spending goes towards chronic diseases, the vast majority of which could be better prevented or managed.

Only a tiny fraction of health-care spending is devoted to the promotion of healthier behavior, even though health care experts agree that moderate improvements in prevention would result in enormous savings to the economy. The Milken Instituteôs major policy recommendations include promoting healthy lifestyles and disease prevention. If we can reduce obesity and smoking in this country, weôd save $60 billion over the next 15 years. The Partnership to Fight Chronic Disease agrees that behavioral factors play a critical role in this surging trend, and that prevention focusing on these factors should be the starting point of any campaign to reduce the incidence of these debilitating conditions.

Let me illustrate how critical behavioral research is to prevention: Basic decision science research elucidates the cognitive, emotional, and social factors that influence judgment and choice, and how judgment and decision-making can be predicted and improved. This research plays a central role in health education by identifying the most effective ways to frame messages that will encourage behavior change. For example, fundamental cognitive research has shown that for certain kinds of prevention efforts, public health information is best conveyed in a ñgain-framedò message (e.g., ñif you regularly apply sunscreen youôll help prevent skin cancer,ò versus ñif you donôt apply sunscreen, you increase your risk for skin cancerò), whereas early detection strategies should be conveyed in a ñloss-framedò way (e.g., ñif you donôt get a mammogram, tumors canôt be detected early, and the later the detection of cancer, the fewer the treatment options.ò). Additional research has shown that the influence of message framing on health behavior is also related to the type of behavior being promoted: People are risk-seeking when they consider losses and risk-averse when they consider gains, which is directly applicable to decision making related to health. This finding has been the basis for a new generation of tailored health-related public service messages that advance the goal of encouraging people to protect their health.

While ñpreventionò has been the buzzword in Congress and health advocacy circles, and there are well-intended programs aimed at reducing health problems, we need to ensure that health promotion strategies are grounded in scientific understanding of how people process information and make decisions.

Next, Iôd like to talk about the status of research into the fundamental processes underlying health behaviors.

Basic Behavioral Science Research Needs A Stable Infrastructure

Broadly defined, behavioral research explores and explains the psychological, physiological, and environmental mechanisms involved in functions such as memory, learning, emotion, language, perception, personality, motivation, social attachments, and attitudes. Within this, ***basic*** behavioral research aims to understand the fundamental nature of these processes in their own right, which provides the foundation for ***applied*** behavioral research that connects this knowledge to real-world concerns such as disease, health, and life stages. Basic behavioral research continues to fare poorly at NIH, a circumstance that jeopardizes the success of the entire behavioral research enterprise. Let me remind you of the current situation:

Traditionally, the National Institute of Mental Health (NIMH) has been the home for far more basic behavioral science than any other institute. Many basic behavioral and social questions were being supported by NIMH, even if their answers could also be applied to other institutes. In recent years, NIMH has begun to aggressively reduce its support for many areas of the most basic behavioral research, in favor of translational and clinical research. This means that previously funded areas now are not being supported.

NIMHôs abrupt decision to narrow its portfolio came without adequate planning and is happening at the expense of critical basic behavioral research. We favor a broader spectrum of support for basic behavioral science across NIH as appropriate and necessary for a vital research enterprise. But until other Institutes have the capacity to support more basic behavioral science research connected to their missions, programs of research in fundamental behavioral phenomena such as cognition, emotion, psychopathology, perception, and development, will continue to languish. The existing conditions for basic behavioral science research undermine the scientific communityôs efforts to address many of the Nationôs most pressing public health needs. We ask the Committee to ensure that NIMH coordinates with other NIH Institutes to support basic behavioral research and training at NIH.

Despite the clear central role of behavior in health, behavioral research has not received the recognition or support needed to prevent, or reverse the effects of, behavior-based health problems in this Nation. APS asks that you continue to help make behavioral research more of a priority at NIH, both by providing maximum funding for those institutes where behavioral science is a core activity, by encouraging NIH to advance a model of health that includes behavior in its scientific priorities, and by encouraging stable support for basic behavioral science research at NIH.

BEHAVIORAL SCIENCE AT KEY INSTITUTES

In the remainder of my testimony, I would like to highlight examples of cutting-edge behavioral science research being supported by individual institutes.

National Cancer Institute (NCI): NCIôs Behavioral Research Program continues to make excellent progress, supporting basic behavioral research as well as translational research on the development and dissemination of interventions in areas such as tobacco use, dietary behavior, sun protection, and decision-making. With current focus on prevention in health care, NCIôs ongoing program in decision-making exemplifies the relationship between basic and applied behavioral research. One study this program funds is testing health behavior interventions that can be broadly applied across sociodemographic populations. Researchers are experimenting with methods of communicating risk and statistics information to women at high risk for breast cancer. These messages draw from a foundation of basic behavioral and social science research into such issues as how people learn and remember health information, how they perceive health risks, and how they are persuaded to adopt healthy behaviors. APS asks Congress to support NCIôs behavioral science research and training initiatives and to encourage other Institutes to use these programs as models.

National Institute on Aging (NIA): One of NIAôs major initiatives is the ACTIVE (Advanced Cognitive Training for Independent and Vital Elderly) trial, which aims to halt the decline of cognitive functioning in older adults. Without good mental capabilities, this population will lose its ability to live independently, which in turn places an enormous burden on an already stressed healthcare system. This landmark study showed that brief mental exercises produced long-lasting improvements years later, which has profound implications for intervention design. These results show that basic behavioral and cognitive science, when it underlies sound interventions that help people in real time, has a very real impact. APS asks the Committee to support NIAôs behavioral science research efforts and to increase NIAôs budget in proportion to

the overall increase at NIH in order to continue its high quality research to improve the health and wellbeing of older Americans.

National Institute on Drug Abuse (NIDA): By supporting a comprehensive research portfolio that stretches across basic neuroscience, behavior, and genetics, NIDA is leading the Nation to a better understanding and treatment of drug abuse. We still know very little about the ways in which social influences interact with the unique adolescent brain to increase vulnerability to drug abuse. New research supported by NIDA is examining events in brain development that change with exposure to drugs as well as to risky behavior. Researchers are asking how these behavioral and neurobiological changes during this stage of development may be uniquely sensitive to the problems of drug abuse behavior. If we can better understand the effects structural brain changes have on functions like thinking, decision-making, sensation and perception we will be able to better develop targeted and more likely effective prevention strategies from the brain development perspective. APS asks this Committee to support this and other critical behavioral science research at NIDA, and to increase NIDAøs budget in proportion to the overall increase at NIH in order to reduce the health, social and economic burden resulting from drug abuse and addiction in this Nation.

National Institute of Dental and Craniofacial Research (NIDCR): Several Institutes are increasingly recognizing the value and relevance of basic behavioral research to their mission. NIDCR is to be particularly commended for their support of behavior and oral health research. As weøve made explicit throughout this testimony, behavior impacts every aspect of health, and oral health is no exception ï to that end, NIDCR is funding basic research on theoretical models that get beyond simple cause-and-effect relationships in behavior. By identifying new ways to conceptualize behavioral and social contributors to oral health, researchers can better identify potential targets for more efficient interventions to help Americans maintains good oral health. APS asks Congress to support NIDCRøs emerging behavioral science research portfolio and to encourage other Institutes to use this program as a model for how basic behavioral research can greatly facilitate achieving their research goals.

Itøs not possible to highlight all of the worthy behavioral science research programs at NIH. In addition to those reviewed in this statement, many other institutes play a key role in the NIH behavioral science research enterprise. These include the National Institute for Child Health and Human Development, the National Institute of Mental Health, the National Institute on Alcohol Abuse and Alcoholism, the National Heart, Lung, and Blood Institute, and the National Institute of Diabetes and Digestive and Kidney Diseases. Behavioral science is a central part of the mission of these institutes, and their behavioral science programs deserve the Committeeøs strongest possible support.

This concludes my testimony. Again, thank you for the opportunity to discuss NIH appropriations for FY 2009 and specifically, the importance of behavioral science research in addressing the Nationøs public health concerns. I would be pleased to answer any questions or provide additional information.