

**TESTIMONY ON THE FY 2008 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 27, 2007

**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 \$30.8 billion for NIH in FY 2008.**  
  
**APS requests Committee support for establishing behavioral and social science research and training as a core priority at NIH** in order to: better meet the Nation's 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 Nation's most pressing public health needs, **we ask the Committee to (1) require NIMH to coordinate its efforts with other Institutes to ensure that these and related areas are adequately supported at NIH; and (2) request a report from NIH outlining a structure for basic behavioral science within NIGMS.**
- **APS encourages the Committee to review behavioral science activities at a number of 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 2008 appropriations for the National Institutes of Health. As our organization's name indicates, APS is dedicated to all areas of scientific psychology, in research, application, teaching, and the improvement of human welfare. Our 18,000 members are scientists and educators at the Nation's 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; and they address the behavioral aspects of smoking and drug and alcohol abuse. Still others look at how genes and

the environment influence behavioral traits such as aggression and anxiety; the development of a normative model of vision to understand how it is used in behavior; and the study of the behavioral and neural mechanisms of sound localization.

As a member of the Ad Hoc Group for Medical Research Funding, APS recommends \$30.8 billion for NIH in FY 2008, an increase of 6.7% over the FY 2007 Joint Funding Resolution level. This increase would halt the erosion of the Nation's 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.

### **BASIC AND APPLIED PSYCHOLOGICAL RESEARCH RELATED TO HEALTH**

Behavior is an indelible part of health. Many leading health conditions — 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 — 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: 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 more 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 may maintain 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.

Despite the clear central role of behavior in health, behavioral research has not received the recognition or support needed to 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.

### **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. I am sorry to have to tell you that basic behavioral research is not faring well at NIH, a circumstance that jeopardizes the success of the entire behavioral research enterprise. Let me describe 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. Recently, 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.

NIMH's 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 community's efforts to address many of the Nation's most pressing public health needs. We ask the Committee to require NIMH to coordinate its efforts with other Institutes to ensure that these areas are adequately supported at NIH.

### **NIGMS SHOULD SUPPORT BASIC BEHAVIORAL SCIENCE RESEARCH**

The situation at NIMH underscores the need for a dependable home for basic behavioral science research and training at NIH. In fact, that is the recommendation of the NIH Director's own Working Group on Research Opportunities in the Basic Behavioral and Social Sciences, which also recommended the National Institute of General Medical Sciences (NIGMS), known as NIH's basic research institute. Congress has given NIGMS a statutory mandate [TITLE 42, CHAPTER 6A, SUBCHAPTER III, Part C, subpart 11, Sec. 285k] to support basic behavioral research and training, but that mandate has not been fulfilled.

As early as FY 2000, this Committee, along with your colleagues in the Senate, has repeatedly issued report language urging NIGMS to fund basic behavioral research and training, saying, for example: "There is a range of basic behavioral research and training that the institute could support, such as the fundamental relationships between the brain and behavior, basic cognitive processes such as motivation, learning, and information processing, and the connections between mental processes and health. The Committee encourages NIGMS to support basic behavioral research and training and to consult with the behavioral science research community and other Institutes to identify priority research and training areas." [House FY2000 Appropriations Report 106-370]

As a result of meetings between NIH Deputy Director Raynard Kington and Representatives Kennedy and Baird, the NIH Director commissioned a panel of outside experts in 2004 to study the matter. This Working Group, which was convened under the auspices of the NIH Director's Advisory Council, spent a year assessing the state of basic behavioral research throughout NIH. In its final report to NIH, the Working Group formally recommended the establishment of a secure and stable home for basic behavioral science research and training at NIH. In particular, it suggested that an Institute such as NIGMS should be that home, as this Committee, the Institute of Medicine, and the National Academy of Sciences have

recommended. NIH has deflected this request, made by multiple entities, time and time again. In view of the fact that 8 of the 10 leading causes of death have a significant behavioral component and that basic research is the underpinning of advances in applied behavioral research, the continued lack of focus of scientific leadership at NIH for this important field of science is counter to the interests of the Nation's health needs.

Basic behavioral research in the cognitive, psychological, and social processes underlying substance abuse and addiction (significance for NIDA, NIAAA, NCI and NHLBI), obesity (significance for NIDDK, NHLBI, and NICHD) and the connections between the brain and behavior (significance for NIMH, NINDS, and NHGRI) just to name a few, all are within the NIGMS mission. Greater involvement between the behavioral science community and NIGMS is an alliance that can reap enormous benefits for NIGMS, for behavioral science, for medical science, and for the public welfare. It is our feeling that the time is ripe for NIGMS to provide a supportive home for the kinds of basic behavioral science research that will be critical to fulfilling the NIGMS mission in the coming years. Given the statutory mandate, the recommendations of a recent Director's advisory council's task force, the strong Congressional interest, the recommendations of the National Academy of Sciences and the Institute of Medicine, the scientific imperative, and most important, the health needs of the Nation, APS asks the Committee to request the Office of the Director to submit to the Committee a report indicating the structure for scientific leadership for this important field within the appropriate grant making institute, by November 16, 2007.

## **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 Institute of Mental Health (NIMH):** In addition to my earlier discussion of NIMH, I would like to give special recognition to the Institute's support of the emerging field of **Social Neuroscience**, which investigates the interaction of biological mechanisms and social processes and behavior. We commend NIMH for making this a priority. Elucidating the complex interplay between brain and social behavior will help us better understand and treat mental disorders such as autism and schizophrenia, and will lead to cognitive therapies for treating the emotion dysregulation associated with post-traumatic stress, depression, and cardiovascular disease.

**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. **Criminal Justice Treatment** ó APS commends NIDA for the success of its Criminal Justice Drug Abuse Treatment program as an excellent example of how science intersects with public interest. By providing evidence-based training to judges about the neurological and behavioral underpinnings of substance abuse and treatment, this program helps ensure that addicted offenders will receive appropriate treatment. **Risky Decision-Making and HIV/AIDS** ó NIDA-funded research is examining every aspect of the transmission of HIV/AIDS through drug abuse and addiction, including risk-taking behaviors associated with both injection and non-injection drug abuse, how drugs of abuse alter brain function and impair decision making, and HIV prevention and treatment strategies for diverse groups. The goal is to achieve a broad understanding of the multiple ways that drug abuse and addiction affect HIV/AIDS and how research can inform public health policy. APS asks this

Committee to support this and other critical behavioral science research at NIDA, and to increase NIDA's 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 on Alcohol Abuse and Alcoholism (NIAAA):** NIAAA research examines the behavioral and biological factors associated with alcohol abuse and alcoholism, the third highest cause of preventable death in the US according to the Centers for Disease Control and Prevention. Psychological scientists supported by NIAAA investigate such topics as social affiliation and alcohol use; the effects of alcohol on memory, decision-making, and cognitive development; and the ways that personality affects the motivation to drink. **Mechanisms of Behavior Change** – NIAAA supports research into the mechanisms of behavioral change in young adults. Understanding the social, behavioral and psychological factors in discontinuing harmful drinking by young adults will lead to more effective treatment and intervention. The findings from these studies will improve clinical practice by identifying key aspects of therapy that must be present for maximum effect and by facilitating the delivery of more individualized treatment, a cross-NIH endeavor. APS asks this Committee to support NIAAA's behavioral science research efforts, and to increase NIAAA's budget in proportion to the overall increase at NIH in order to reduce the health, social and economic burden resulting from alcohol abuse and alcohol dependence.

**National Cancer Institute (NCI):** APS commends the excellent progress that the Behavioral Research Program at NCI has achieved in the last several years. This program supports a wide range of fields such as basic behavioral research to research on the development and dissemination of interventions in areas such as tobacco use, dietary behavior, sun protection, and decision making. The transdisciplinary nature of the program's research is particularly exceptional and forward-thinking. **Stress and Cancer** – One of the most exciting areas of research at NCI concerns the link between stress and cancer. Studies now show that chronic stress, or even the perception of stress, can cause ovarian tumors to not only grow faster but also makes them denser and more aggressive. Important work on breast cancer in socially isolated individuals has great potential for understanding how behavior and social environment can have a very real impact on tumor biology, and thus, how to use this knowledge to prevent cancer. APS asks Congress to support NCI's behavioral science research and training initiatives and to encourage other Institutes to use these programs as models.

It's 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 NIH behavioral science research enterprise. These include the National Institute for Child Health and Human Development, the National Institute on Aging, 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 Committee's strongest possible support.

This concludes my testimony. Again, thank you for the opportunity to discuss NIH appropriations for FY 2008 and specifically, the importance of behavioral science research in addressing the Nation's public health concerns. I would be pleased to answer any questions or provide additional information.