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**Position Statement on the FY 2010 Budget Request for the
National Institutes of Health (NIH) Submitted by the
NIH Task Force of the Bioengineering Division**

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The NIH Task Force of the Bioengineering Division of the Basic Engineering Group of the Council on Engineering of ASME (“Task Force”), is pleased to provide comments on the bioengineering-related programs contained within the National Institutes of Health (NIH) Fiscal Year (FY) 2010 budget request. The ASME Bioengineering Division is focused on the application of mechanical engineering knowledge, skills, and principles for the conception, design, development, analysis, and operation of biomechanical systems.

The Importance of Bioengineering

Bioengineering is an interdisciplinary field that applies physical, chemical, and mathematical sciences, and engineering principles to the study of biology, medicine, behavior, and health. It advances knowledge from the molecular to the organ systems level, and develops new and novel biologics, materials processes, implants, devices, and informatics approaches for the prevention, diagnosis, and treatment of disease, for patient rehabilitation, and for improving health. Bioengineers have employed mechanical engineering principles in the development of many life-saving and life-improving technologies, such as the artificial heart, prosthetic joints and numerous rehabilitation technologies.

Background

The NIH is the world's largest organization dedicated to improving health through medical science. During the last 50 years, NIH has played a leading role in the major breakthroughs that have increased average life expectancy by 15 to 20 years.

The NIH is comprised of different Institutes and Centers that support a wide spectrum of research activities including basic research, disease and treatment-related studies, and epidemiological analyses. The missions of individual Institutes and Centers varies from either study of a particular organ (e.g. heart, kidney, eye), a given disease (e.g. cancer, infectious diseases, mental illness), a stage of life (e.g. childhood, old age), or finally it may encompass crosscutting needs (e.g., sequencing of the human genome and the National Institute of Biomedical Imaging and Bioengineering (NIBIB)).

The total fiscal year (FY) 2010 NIH budget request is \$30.8 billion, which is a \$443 million, or 0.4 percent increase from the amount funded in the FY 2009. While this reverses a downward trajectory for NIH from the past few years, this percentage increase in NIH budget does not keep up with the inflation rate. We note that NIH received \$10.4 billion as part of the American Recovery and Reinvestment Act (ARRA) of 2009 (P.L. 111-5).

The Task Force is grateful to Congress and the Obama Administration for the unexpected \$10.4 million boost to NIH as it concluded the FY 2009 budget, and we are equally pleased by the increase in funding requested for FY 2010. Research and development is expected to account for 97 percent of the total FY 2010 NIH budget, or \$28.3 billion. With this, the Administration

estimates \$243 million, or 9,849 new and competing research project grants (RPGs) will be supported, about the same amount as FY 2009.

NIBIB Research Funding

The Administration's FY 2010 budget requests \$313 million for the NIBIB, an increase of \$4 million or 1.45 percent from the FY 2009 appropriated amount. This does not account for the \$78 million that the NIBIB received as part of ARRA. The mission of the NIBIB is to seek to improve human health by leading the development and application of emerging and breakthrough technologies based on a merging of the biological, physical, and engineering sciences.

The budget for NIBIB Extramural Research would increase by \$4 million to \$284.8 million while funding for intramural research would be up slightly to \$11.1 million from \$10.9 million in FY 2009. NIBIB's Research Management and Support request is \$16.7 million, an increase of \$0.3 million over FY 2009. Additionally, NIBIB funds the Discover Science and Technology (DST) program, which is focused on the discovery of innovative biomedical engineering and imaging principles for the benefit of public health. The FY 2010 request for DST is \$96.1 million, a \$1.05 million increase from FY 2009.

NIBIB also funds the Applied Science and Technology (AST) program, which supports the development and application of innovative technologies, methods, products, and devices for research and clinical application that transform the practice of medicine. The FY 2010 request for AST is \$164.5 million, a \$1.7 million increase from FY 2009.

Task Force Recommendations

- The Task Force is concerned that the United States is rapidly falling behind our counterparts in the European Union and Pacific Rim with regards to bioengineering advancements. The Task Force wishes to emphasize that, in many instances, bioengineering-based solutions to health care problems can result in a reduction in health care costs. Therefore, we strongly urge Congress to abide by the Administration's request for increased funding for bioengineering within the NIBIB and across NIH.
- The NIBIB must obtain sustained funding increases, both to accelerate medical advancements as our nation's population ages, and to mirror the growth taking place in the bioengineering field. The task force believes that the Administration's budget request for FY 2010 is not aligned with this objective; a 1.45% budget increase will not keep up with current inflation and allow for the future medical advancements needed in the future.
- While the Task Force supports federal proposals that seek to double federal research and development in the physical sciences over the next decade, we believe that strong federal support for bioengineering and the life sciences is especially essential to the health and competitiveness of the United States. The supplemental funding that NIH received as part of ARRA and the budget request by the Administration does not completely erase the past several years of disappointing budgets.

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