Grant Title: BIOENGINEERING APPROACHES TO ENERGY BALANCE AND OBESITY (R21)

PA Number: RFA-HL-07-007

Area of Research: Increase the number of useful technologies and tools available to scientists to facilitate their research in energy balance and health.

Release Date and expiration: August 22, 2006 release; December 23, 2006 expiration.

Letter of Intent: November 24, 2006

Application Deadlines: December 22, 2006

Amount: R21: Direct costs are limited to $275,000 over an R21 two-year period, with no more than $200,000 in direct costs allowed in any single year.

Length of Support: Up to 2 years

Eligible applicants: For-profit and non-profit organizations; public or private institutions, such as universities, colleges, hospitals, and laboratories; units of state and local governments; eligible agencies of the Federal government; domestic or foreign institutions/organizations; faith-based or community-based organizations; Indian/Native American Tribal Governments; and Indian/Native American Tribally Designated Organization.

Agency/Department: NIH; NHLBI, NIA, NIBIB, NCI, NIDDK; NSF

Summary: The purpose of this funding opportunity is to develop and validate new and innovative engineering approaches to address clinical problems related to energy balance, intake, and expenditure. The goal is to increase the number of useful technologies and tools available to scientists to facilitate their research in energy balance and health. Eventually these research tools should facilitate therapeutic advances and behavioral changes to address such problems as weight control and obesity. The research proposed in response to this FOA is expected to follow an engineering approach to substantially address the problems of measuring and assessing energy balance to better understand, treat, and prevent obesity. The “Engineering Approach” is a powerful method which involves the application of knowledge of physical and biological sciences and mathematics to address specific practical problems, in this case energy balance and obesity. The approach incorporates the following elements in a systematic way: System Identification, Empirical Understanding of Behavior and Response, Modeling of Physics, Simulation of Physical Behavior, and Experimental Validation.