SOCIETY OF NUCLEAR MEDICINE AND MOLECULAR IMAGING

CONTINUE FUNDING FOR NUCLEAR MEDICINE RESEARCH

For nearly 60 years, the Department of Energy (DOE) has funded essential, fundamental nuclear medicine research in the areas of biomedical imaging and radiotherapy that has facilitated technological breakthroughs. Only the federal government funds basic nuclear medicine research, so this DOE program is critical for training and education. Since the DOE has primary responsibility for isotope production, it would be beneficial to continue to fund nuclear medicine research.

DOE-funded nuclear medicine research has already resulted in numerous achievements in patient care and will lead to more. It has contributed extensively to the development of:

- Cutting-edge nuclear medicine imaging and therapy procedures, including positron emission tomography (PET), that are crucial for identifying the presence of cancer in the body and how the disease has progressed.
- Cardiac stress tests to analyze heart function
- Bone scans for orthopedic injuries
- Lung scans for orthopedic injuries
- Diagnoses of liver/gallbladder function abnormalities and neurological disorders
- Radium-223

Success story: During the early development of a new method of localizing and treating cancers with radionuclides, Garden State Cancer Center researchers (under leadership of Robert M. Sharkey, PhD, and David M. Goldberg, ScD, MD, from Morris Plaines, NJ) received critical DOE funding to further evaluate this technology prior to its advancing to clinical trials in the U.S. and Europe. "Pretargeted" nuclear imaging and therapy is a two-step method allowing a multi-headed antibody to localize to sites of tumor, followed by injection of a small radioactive peptide, which then locks onto the mutispecific antibody only at the site of the cancer. Since this project involves the medical applications of radioactivity for improved detection and therapy of cancer, DOE was an appropriate and essential sound of funding of these studies prior to clinical trials, which are conducted with the help of NIH.

There has been discussion of moving funding for nuclear medicine research to the National Institute of Biomedical Imaging and Bioengineering (NIBIB) at the National Institutes of Health. If funding is moved to NIBIB, it is imperative that funding be increased to at least $30 million.

Prior to cutting funding in fiscal year (FY) 2006, nuclear medicine medical application research was funded at about $34 million. Congress restored funding for nuclear medicine medical application research in (FY) 2008. Funding levels for the following years were:

- $17.5 million for FY08
- $17.5 million for FY09
- $17.5 million for FY10
- $12 million for FY12
- $5 million for FY13
- $5 million for FY14 (currently in the Senate bill only)

The modest amount for research funding over the years has contributed greatly to a multi-billion industry which provides well-paying jobs across the country by fueling innovation and new technologies – not to mention the tremendous advancements in patient care. Additionally, researchers are leaving the field by finding work in other areas or retiring, and without continuation of funding there is a real possibility that the next generation of researchers will have no opportunity for hands-on training.