

SNM's E&R Foundation Awards Annual Fellowships

The Education and Research (E&R) Foundation of The Society of Nuclear Medicine (SNM) has awarded its Pilot Research Grant of \$4,500 to Jacquelyn Ciel Yanch, PhD, for her proposal entitled "Computer Simulation of Tomographic Images for Quantitative Evaluation of Correction Algorithms in Single Photon Emission Computed Tomography" (SPECT). Through this project, Dr. Yanch, assistant professor of nuclear engineering at the Massachusetts Institute of Technology, in Cambridge, will explore methods to improve the quantitative value of SPECT images by correcting the Compton-scatter and the differential attenuation of photons.

The E&R Foundation has also conferred three Student Fellowship Awards for 1990, with a stipend of \$3,000 each, to the following applicants:

- Mark W. Wilson, an MD candidate at the University of Michigan Medical School, in Ann Arbor, received an Award for his research proposal on "A Comparative Analysis of SPRINT and SPECT Brain Imaging in Ischemic Cerebrovascular Disease." According to James M. Mountz, MD, PhD, assistant professor in the division of nuclear medicine at the University of Michigan, single photon ring tomography, or SPRINT, is a promising SPECT modality—originally developed at Michigan—which offers high dynamic resolution similar to positron emission tomography (PET) but at a cost comparable to conventional SPECT.

Mr. Wilson, also a 1988 Student Fellowship Award recipient, will clinically apply SPRINT to image cerebral blood flow in stroke patients and compare the quality and resolution of this novel modality to conventional SPECT studies. He also expects to determine if SPRINT is capable of providing functional and anatomical details beyond the scope of conventional SPECT.

- Adam M. Mirot, an MD candidate at the University of Pennsylvania's School of Medicine, in Philadelphia, received an Award for his research proposal on the use of PET to image cerebral utilization of glucose, blood flow, and oxygen metabolism in order to make comparisons between patterns seen in patients undergoing normal aging and those suffering from multi-infarct and Alzheimer's dementias.

Mr. Mirot wants to ascertain whether the brain's energy metabolism decreases with age in people aging normally and whether or not the brain's energy me-

tabolism decreases even faster for people with senile dementia. Mr. Mirot also hopes to discern if subtypes of dementia are characterized by specific metabolic abnormalities.

- Susan Madsden, a PhD candidate in radiopharmaceutical chemistry at Washington University, in St. Louis, Missouri, received an Award for her proposal to explore the development of inorganic radiopharmaceuticals (radioactive metals), which can be prepared in a parent/daughter generator system, labeled onto monoclonal antibodies, and used in imaging studies designed to detect colon carcinoma.

Radioactive metals, notably gallium-68, offer a readily available and inexpensive substitute to the organic radionuclides more commonly used in monoclonal antibody imaging applications. According to Ms. Madsden, most radiopharmaceutical compounds developed for PET require a costly in-house cyclotron for routine production, thus precluding many medical institutions from employing an active PET facility. Consequently, the development of a diverse spectrum of inorganic radiopharmaceuticals produced by a relatively inexpensive parent/daughter generator system will allow more widespread use of PET diagnostic techniques.

The E&R Foundation gave this year's Nuclear Medicine Technologist Award to a University of Kansas Medical Center research team headed by Mel L. Allen, RNMT, for a study entitled "The Effect of Cyclosporine in Lowering Red Blood Cell-Labeling Efficiency." This project sought to determine why the quality was degraded in technetium-99-labeled red blood cell (RBC) images taken of heart transplant patients. The researchers confirmed that the poor quality images occurred in patients after they had orally ingested significant amounts of cyclosporine—an antirejection drug. Apparently, peak concentrations of 1000 $\mu\text{g}/\text{mL}$ of cyclosporine led to significant decreases in RBC-labeling efficiency and lowered image quality enough to undermine such studies. Thus, patients were advised to refrain from taking this medication until after the imaging procedure.

The \$1,000 Technologist Award shall be presented to the winners during The Society of Nuclear Medicine's 37th Annual Meeting in Washington, DC in June, 1990. The winning research paper will be published in the June issue of *The Journal of Nuclear Medicine Technology*. ■