

western Medical Center in Dallas refers to Dr. Kuhl as "the father of emission tomography" since his inventions were the foundation for PET and SPECT.

Proof of this point is illustrated in Dr. Kuhl's founding of a PET Center at University of California at Los Angeles (UCLA) in the late 1970s. His initial work focused on stroke, epilepsy and Alzheimer's disease. For the next ten years at the UCLA, Dr. Kuhl and his colleagues established [^{18}F]FDG-PET as a study method vital for differentiating normal brain activity from aging and aging from degenerative brain disease. Cases in point: Dr. Kuhl was the first to demonstrate that temporal lobe hypometabolism in epilepsy is an effective preoperative guide to the site of onset of intractable seizures. He found that local metabolism in stroke is altered by functional de-afferentation as well as by tissue death. He also was the first to document that Huntington's disease causes caudate hypometabolism before either symptoms or atrophy and that demented patients with Alzheimer's and Parkinson's disease share common cerebral metabolic patterns.

Even with his spate of PET discoveries, Dr. Kuhl's interest was not confined to this imaging modality. In 1980, he revisited SPECT after many years and performed the first quantitative measures of local cerebral blood flow determined with the Mark IV scanner using ^{123}I -IMP and tracer kinetic analysis.

What the Future Holds

In his more recent work at the University of Michigan, Dr. Kuhl has concentrated on exploring degenerative brain disorders using both PET and SPECT. He and his colleagues have introduced new radioactive ligands "which should permit a more detailed exploration of neurotransmitter abnormalities in both Parkinson's and Alzheimer's," Dr. Kuhl said.

He is convinced that eventually the research will lead to a better classification system for matching patients with the most appropriate therapy. "Since neurotransmitter mapping of the brain can be accomplished in patients only with emission tomography, scientists in nuclear medicine have both a remarkable opportunity and a serious obligation to do the job right," Dr. Kuhl said.

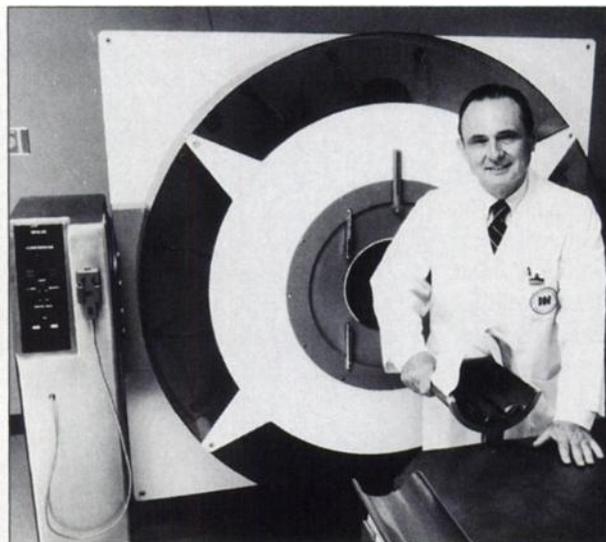
What does Dr. Kuhl view as his greatest accomplishment? His reconstruction tomography which makes it possible to determine quantitative measurements of localized brain regions. "When I started out in the field of nuclear medicine science, my intention was to introduce cross-sectional emission tomography as a means of solving the problem of quantifying radioactive tracers within small volumes of the living human brain," Dr. Kuhl said. Without this foresight, nuclear medicine probably would not have evolved into the specialty it is today.

—Stacey Silver

In Memoriam

Michel M. Ter-Pogossian, PhD, an internationally known pioneer in the use of cyclotron-produced radionuclides in biomedical research, died suddenly of a heart attack on June 19, 1996, while visiting Paris. Dr. Ter-Pogossian, 71, was emeritus professor of radiology at Washington University's Mallinckrodt Institute of Radiology in St. Louis.

Among his many accomplishments, Dr. Ter-Pogossian will be remembered foremost for helping to develop the PET scanner into a practical diagnostic tool. In the early 1970s, he was a leader in the collaborative research team of physical scientists, chemists and nuclear physicians who developed the concept of PET. He played a major role in developing short-lived radionuclides and developed the first PET scanner and the first multislice PET scanner as well as the first time-of-flight PET scanner.



Michel M. Ter-Pogossian, PhD

During a career which spanned more than four decades, Dr. Ter-Pogossian earned numerous accolades for his achievements in nuclear science, including both the Paul C. Aebersold Award and the Georg Charles de Hevesy Nuclear Medicine Pioneer Award of the Society of Nuclear Medicine (SNM), France's Gold Medal Award of the French Society of Nuclear Medicine and Biophysics, and Canada's Gairdner Award. He was a member of many professional societies including SNM. He was elected to the Institute of Medicine, National Academy of Sciences in 1987 and served on the editorial boards of major scientific journals

including *The Journal of Nuclear Medicine*.

Dr. Ter-Pogossian was a prolific author with more than 250 scientific articles and book chapters to his credit. In addition, he served as a member of several Department of Energy and National Institutes of Health committees. He is survived by his wife Ann, three children and five grandchildren.