

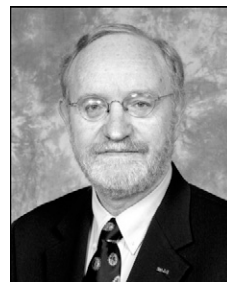
MI at the Mid-Winter Meeting

At SNM's Mid-Winter Educational Symposium, held February 14–18 in Newport Beach, CA, 2 educational sessions focused on molecular imaging.

The SNM Radiopharmaceutical Sciences Council, in collaboration with the Molecular Imaging Center of Excellence, sponsored a program titled “New Radiopharmaceuticals for Molecular Imaging.” Organized by Henry F. VanBrocklin, PhD, of the University of California–San Francisco, the program highlighted the breadth of molecular imaging radiopharmaceuticals now available or in the pipeline. In this program, Robert Mach, PhD, of Washington University (St. Louis, MO) discussed the challenges that radiochemists face in the design of receptor-binding agents for the brain. He presented an update on areas of current interest, including radiopharmaceuticals for imaging the dopaminergic system, Alzheimer disease pathophysiology, and neuroinflammation, a topic of increasing interest because of its possible role in several neurologic disorders. Carolyn Anderson, PhD, also of Washington University, reviewed applications of molecular imaging in oncology, including

cellular proliferation, hypoxia, tumor receptors, and angiogenesis. The wide variety of pathophysiologic mechanisms in the heart that are targets for imaging was emphasized by Jeanne Link, PhD, of the University of Washington (Seattle), in her talk on new radiopharmaceuticals in cardiology. In the final lecture, Dr. VanBrocklin described the advantages offered by the exploratory Investigational New Drug mechanism in facilitating the initial use of new radiopharmaceuticals in humans.

Under the leadership of Paul Kinahan, PhD, the SNM Computer and Instrumentation Council organized “New Instrumentation for Molecular Imaging.” Suleman Surti, PhD, from the University of Pennsylvania (Philadelphia), explained the principles of time-of-flight PET imaging and the reasons for the recent resurgence of interest in this



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technique, including new detector materials and improved lesion detectability in heavier patients. Compensation for respiratory motion is a major concern in PET/CT, because of the different acquisition times for the fast CT and slower PET components of the procedure. Sadek Nehmeh, PhD, from Memorial Sloan–Kettering Cancer Center (New York, NY), described various approaches to dealing with resulting image artifacts. Tinsu Pan, PhD, of the M.D. Anderson Cancer Center (Houston, TX), discussed the effects of advances in CT technology on PET/CT and also described methods to

correct for motion in cardiac and tumor imaging. An emerging technology for molecular imaging is the combination of PET and MR imaging into a single system capable of simultaneous imaging. Ciprian Catana, PhD, of Harvard Medical School (Boston, MA), discussed the challenges in designing these systems and showed promising results in systems for small animal studies and for clinical imaging in humans.

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