

Molecular Imaging in the Spotlight at RSNA 2007

Molecular imaging was both a highlighted topic and an integral part of many of the scientific presentations and exhibits, educational offerings, and technologic advances on display at the 93rd Scientific Assembly and Annual Meeting of the Radiological Society of North America (RSNA), held November 25–30 in Chicago, IL. The world's largest international medical meeting, as always, featured a kaleidoscopic array of offerings at McCormick Place: 1,765 scientific papers in 16 subspecialties, 1,498 education exhibits, 604 scientific posters, 257 refresher courses, and 83 multisessions. Almost 62,000 individuals, including physicians, physicists, technologists, trainees, exhibitors, and others, were in attendance.

NIH Director Sees Future Prominence for Molecular Imaging

The focus on molecular imaging began early in the meeting. On November 26, Elias A. Zerhouni, MD, director of the National Institutes of Health (NIH; Bethesda, MD) delivered the Eugene P. Pendergrass New Horizons Lecture, "Major Trends in the Imaging Sciences." Zerhouni, who was previously department chair and professor of radiology at the Johns Hopkins University School of Medicine (Baltimore, MD), stressed the significance of the rapid changes that molecular medicine has brought to both knowledge and techniques in imaging practice. He emphasized the combined needs for redefinition of the scope of imaging research and for enhanced training and incorporation of new approaches into routine applications. "Imaging may gain an even more prominent place in this century by redefining itself as the core interdisciplinary science for extracting spatially and temporally resolved biological information at all physical scales from angstroms to microns to centimeters," he said. He predicted that imaging will remain the mainstay of evaluation and diagnosis for acute diseases and will lead the development of resourceful, minimally invasive therapies for a growing number of conditions.

Zerhouni urged his audience to remain especially attuned to the continuous stream of new knowledge about the biological complexities of molecular medicine and to "embrace the future" of the field. He emphasized that fundamental change in medicine is always spurred by 1 (or both) of 2 compelling factors: a public health need and/or a scientific breakthrough. He described the NIH's 3-pronged Roadmap to long-term response to existing challenges and to change in the future: (1) identifying and encouraging new pathways to discovery; (2) creating and sustaining multidisciplinary research teams; and (3) re-engineering the way in which the clinical research enterprise functions. "Medicine will be predictive, personalized, and preemptive—as we've already seen with advances in Alzheimer disease, diabetes, and in the development of the vaccine for cervical cancer—and finally participatory, in which we shift to a cooperative network made up of patients and

health care providers," he said. "These trends will be served by changes in science and public health demand."

Molecular Imaging in Every Venue

Business was brisk at the SNM Molecular Imaging Center of Excellence (MICoE) booth in the Molecular Imaging Learning Zone area of the Lakeside Learning Center, as attendees stopped by to learn more about MICoE activities and receive free copies of a CD featuring all molecular imaging articles published in 2006 in *The Journal of Nuclear Medicine*. In other areas, poster authors and representatives from federal programs, research and training sites, and molecular imaging societies, including SNM, were available to discuss special training and funding programs, current projects and findings, and near-term uses of molecular imaging in clinical practice. Many technical exhibitors on the main floor of McCormick Place also displayed the Molecular Imaging Zone logo to indicate that their product offerings are targeted at molecular imaging or auxiliary methods.

A Changing Scene for Nuclear Medicine

The Molecular Imaging/Nuclear Medicine special content brochure released by RSNA (and still available at http://rsna2007.rsna.org/V2007/documents/content_brochures/SSC_Molecular_Imaging.pdf) listed 170 scientific presentations, special courses, and posters in this category. According to RSNA records, more than 480 abstracts were submitted for consideration in molecular imaging and nuclear medicine.

But these numbers do not tell the entire story. Several attendees reported to Newslines that, more than ever before, nuclear medicine techniques were included as routine elements in anatomic- or disease-focused sessions that previously would have focused only on conventional imaging. "It's not something I can quantify, but there was a strong sense of nuclear medicine being integrated into the mainstream in ways that we didn't see a decade or even 5 years ago," reported Conrad Nagle, MD, director of the SNM Publications Committee and Corporate Chief of Diagnostic Imaging for the Beaumont Hospitals (Royal Oak, MI). "A session on abdominal imaging, for example, at this year's meeting might include presenters who addressed the identification of mechanisms in a specific disease with PET/CT as one of the most effective routine imaging modalities—so that although the topic of the session was not listed as nuclear medicine in the scientific program, this was indeed the modality featured in the work described. This is an integration and acceptance that we're seeing in our practices as well. The wide array of presentations that featured PET and hybrid imaging at RSNA made it clear that these technologies have provided a point of entry behind which newer molecular imaging techniques will also enter the mainstream of imaging practice." ✨