

# Leading the Charge

Every day is race day as Siemens Molecular Imaging division blazes the road to molecular medicine. In a rapidly evolving industry, the Molecular Imaging division stays ahead of the rest by pursuing comprehensive solutions and a forward-looking strategy.

By Claudette Yasell

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Michael Reitermann, President of Siemens Molecular Imaging Division, Hoffman Estates, Illinois

The race is on to transform the molecular imaging industry. The future in this field is a world where medicine is disease-focused and individualized. In that world, genetic screenings for predisposition to disease and treatments based on genetic fingerprints will replace the mass production of pharmaceutical-based treatments. The development of disease-specific tracers for detection in the earliest stages has already begun, and Siemens Molecular Imaging division is leading the proverbial pack. Already the leader in producing the highest-quality molecular imaging equipment for SPECT, PET and hybrid systems, Siemens recently expanded its molecular repertoire through the acquisition of CTI Molecular Imaging Inc., a pioneer in PET, preclinical imaging systems and biomarker development – in May 2005.

“Acquiring CTI was a logical next step in our strategy, expanding Siemens’ technological leadership in the PET industry,” says Michael Reitermann, president of Siemens Molecular Imaging division. “The acquisition enabled Siemens to bolster its clinical business and enter the preclinical scanner business, as well as the cyclotron and PETNET biomarker

solutions arena.” With the merger complete, Siemens’ new Molecular Imaging division will lead the mission to discover, develop and deliver molecular imaging solutions that improve healthcare outcomes.

## The Power of Three

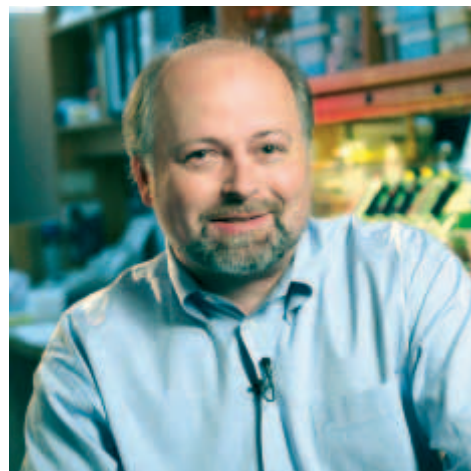
The new division premiered its comprehensive molecular imaging solutions offerings at the annual meeting for the Society of Nuclear Medicine last summer and invited the attendees to experience the possibilities in molecular imaging with Siemens. The division’s expanded solutions palette is aligned with Siemens Medical Solutions’ overall vision; a three-tiered strategy that incorporates in vitro diagnostics using “lab on a chip” or novel micro-fluidic approaches, molecular imaging, and knowledge-driven healthcare through information technology. This successful combination will affect every stage of the care path, from prevention to diagnosis, therapy and follow-up. “We are actively involved in pursuing these strategies,” says Reitermann, “aiming to revolutionize molecular imaging of biological processes and lead the change toward personalized



THE COMBINATION OF in vitro diagnostics, molecular imaging and knowledge-driven healthcare is essential to Siemens Medical Solutions' molecular medicine strategy.

medicine." Focusing its effort on preclinical and clinical solutions and biomarkers, the division is raising the bar in the imaging industry. The simultaneous manufacture of the highest quality clinical imaging systems and the delivery of superior in vivo imaging

equipment, together with research into new probes to detect disease in the earliest stages, puts Siemens in a position to influence change. The division is developing new biomarkers and establishing a complete solutions offering in the preclinical market that includes



FROM LEFT: Michael Reitermann, President of Siemens Molecular Imaging Division, Michael Phelps, PhD, Head of the Department of Molecular and Medical Pharmacology at the University of California Los Angeles in California, and Ralph Weissleder, MD, PhD, Professor of Radiology at Harvard Medical School in Cambridge, Massachusetts and Director of the Center for Molecular Imaging Research at Massachusetts General Hospital in Boston, Massachusetts.

biomarker development and distribution, as well as cyclotron manufacturing. According to Reitermann, "At the core, the development of new biomarkers will drive the change toward molecular medicine, supported by the most sophisticated pre-clinical imaging equipment and applications. Clinically, hybrid imaging systems are already transforming the industry and driving a paradigm shift toward multidisciplinary cooperation with superior diagnostic tools."

### From Research to Reality

"Active research into new tracers that target specific diseases will ultimately lead to earlier detection, disease prevention, and personalized therapies," says Reitermann, referring to

the division's biomarker research program. As new tracers are developed, the cyclotron-based network of radiopharmacies will be ready and able to create and distribute them. Siemens' Eclipse cyclotrons and Explora chemistry modules are the most widely used in the industry, with a proven performance and uptime track record.

New offerings in preclinical imaging systems allow for in vivo imaging of small animals. Evaluating new treatment therapies and visualizing different types of cancers will enable researchers to detect disease earlier and treat it more effectively. The division recently added the microPET®, microCAT® and microCAT+SPECT scanners to Siemens' existing preclinical portfolio, which includes BonSAI optical imaging technology. These new scanners offer early insight into in vivo pharmacokinetics, pharmacodynamics and the efficacy of novel compounds. They provide a bridge between the laboratory and the clinic, and hold the potential to accelerate the path to discovery.

Providing the industry with quality preclinical and biomarker solutions is a natural extension of Siemens' approach of maintaining partnerships with industry and academic leaders such as Michael Phelps, PhD, head of the

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Department of Molecular and Medical Pharmacology at the University of California Los Angeles, and Ralph Weissleder, MD, PhD, Professor of Radiology, Harvard Medical School, and Director of the Center for Molecular Imaging Research, Massachusetts General Hospital, Boston. Working collaboratively to make technological advances in PET and MR technologies, hybrid imaging, and key scientific breakthroughs enables Siemens to offer its partners the most current advances in the molecular imaging field.

## The Personal Touch

Striving to consistently bring technological innovation to traditional clinical imaging, the Molecular Imaging division dominates the market with its hybrid offerings, Symbia® TruePoint™ SPECT-CT technology and Biograph™ PET/CT. Combining the functional imaging of PET and SPECT with the powerful diagnostic capabilities of multislice CT, Siemens' hybrid imaging families are already influencing the way patients are diagnosed and treated. According to Reitermann, "We are maintaining the rapid pace of innovation in hybrid imaging and applying technological advances, as well as championing the adoption of hybrid technology in areas such as radiology and cardiology, where the advantages of bringing together functional and diagnostic imaging are in the early stages."

Smarter IT solutions for clinical image processing, the development of new applications for preclinical imaging systems, and Siemens Medical Solutions' pursuit of knowledge-driven healthcare through data capture and mining – all based on genetic makeup – are all leading the industry toward personalized medicine.



THE LATEST Symbia TruePoint SPECT-CT and biograph PET/CT systems are a testament to Siemens' commitment to rapid innovation with uncompromised excellence.

**Author:** Claudette Yasell holds an MBA from Dominican University, River Forest, Illinois.