

## News Spectrum

### INDUSTRY

**PerkinElmer Inc.** (Boston, MA) has bought the assets relating to a proteomics labeling technology from platform technology developer **Agilix Corp.** (New Haven, CT) for an undisclosed sum.

The technology allows simultaneous quantification of protein molecules from multiple samples during mass spectrometry experiments.

► **Waters Corp** (Milford, MA) and **Thermo Electron Corp** (Waltham, MA) have entered into a collaborative agreement to combine Waters' ultra high performance liquid chromatography (uHPLC) technology with the full range of Thermo's mass spectrometers.

The technology convergence was partly customer-driven, according to **Gene Cassis**, Waters' vice president of investor relations, who told Instrumenta that many of Waters' customers were already combining the UPLC system with MS technology from other vendors.

### RESEARCH

The **Oregon Health & Science University's** (Portland, OR) new **Advanced Imaging Research Center** has bought a 12 Tesla magnet that will serve as the centerpiece for a cut-

ting-edge magnetic resonance imaging system. The magnetic field of the magnet is 120,000 times that of the Earth, and is one of the strongest in the world.

"This state-of-the-art 12T system will provide some of the clearest, and likely some of the most useful images in the history of MRI science," said **Charles Springer**, director of the research center.

Researchers will use the powerful MRI system for human health studies in rodents on neurological diseases such as multiple sclerosis, Alzheimer's and stroke. The system will also benefit the blood-brain barrier program at the University.

The magnet weighs about 12 tons and the inner diameter of its cylindrical bore is 31 centimeters. It was bought with the help of a \$1.75 million grant from the **W. M. Keck Foundation** (Los Angeles, CA). The only other facility in the world that has a 12T MRI system is the **National Institutes of Health** (Bethesda, MD).

► Researchers at **New York University** (New York, NY) and the **University of Linz** (Linz, Austria) have developed a completely non-invasive MRI imaging method. Their low-energy nuclear magnetic resonance technique, which forms the basis for MRI, does not require radio frequency radia-

## Market Profile: Ion Trap Time-of-Flight (IT-TOF) Mass Spectrometry

The world of mass spectrometry has been evolving at an astounding rate as developers push what is an inherently powerful analytical technique to even higher levels of capability. Numerous configurations of tandem mass analyzers have been commercialized, with one of the most recent being ion-trap time-of-flight.

Ion-trap time-of-flight (IT-TOF) is essentially a variant of the quadrupole TOF, and was developed to meet the need of those scientists who need MS<sup>n</sup> capability with the precursor ion selection and the high-resolution capabilities that traditional Q-TOF provides. IT-TOF is therefore able to provide powerful structural analysis of compounds in complex matrices, in addition to highly accurate mass measurement, making it useful in applications such as biomarker discovery, metabolite ID, proteomics research, clinical research, drug development, and forensics.

The first commercially available IT-TOF was the Radiance Pro, which was developed by Syagen in 2001. It was a relatively low-cost system that was marketed for security and forensics applications. Although the Radiance Pro has since been discontinued, the same IT-TOF technology is included

in Syagen's new Guardian portal inspection system. Shimadzu's Kratos division introduced the AXIMA-QIT in 2002, which was a MALDI-IT-TOF system, followed in 2005 by Shimadzu Biotech's introduction of its LC-IT-TOF. Hitachi has also developed an LC-IT-TOF system, which uses a linear ion trap design, and is now in the process of introducing its system worldwide.

IT-TOF accounted for about 5% of the more than \$230 million Q-TOF market in 2005, but should see strong double-digit growth. The entrance of any one of the top mass spectrometer suppliers into this market segment

would magnify initial growth.

The foregoing data were extracted from SDI's market analysis and perspectives report entitled *Mass Spectrometry: Ultra-High Performance and Innovation Reshape the Market*. For more information, contact Stuart Press, Senior Consultant, Strategic Directions International, Inc., 6242 Westchester Parkway, Suite 100, Los Angeles, CA 90045, (310) 641-4982, fax: (310) 641-8851, www.strategicdirections.com.

Q-TOF Mass Spectrometry Market, 2005

