BioSpectrum the business of Bio & Health Sciences

Thermo Fisher extends Industry-leading Mass Spectrometry Portfolio

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Innovative solutions integrate new data acquisition, analytical and smart algorithm capabilities

Thermo Fisher Scientific Inc. the world leader in serving science, is accelerating the pace of innovation in the lab with the introduction of a new generation of intelligence-driven mass spectrometry instruments, workflows and software. The company will showcase these new additions to its industry-leading offering during the 67th American Society for Mass Spectrometry (ASMS) Conference on Mass Spectrometry and Allied Topics, being held June 2–6, in Atlanta, Georgia.

"We recognized the ability to transform the mass spectrometry market when our groundbreaking Orbitrap mass analyzer technology was presented 20 years ago at ASMS," said Dan Shine, senior vice president and president of analytical instruments for Thermo Fisher Scientific. "As the demand for high-performance, accurate analytical instruments and innovative software continues to evolve, we are excited to introduce new technology that will allow scientists to acquire data more quickly and with greater accuracy than ever before. We are pushing the pace of discovery in protein research with the launch of new mass spectrometers that enable unprecedented proteome analysis, down to the level of single-cell analysis."

High-performance mass spectrometers advance protein-based analysis

Leading the new-generation mass spectrometry (MS) platforms is the Thermo Scientific Orbitrap Exploris 480 mass spectrometer. This innovative new system is designed to combine proven technology, advanced capabilities and intelligence-driven data acquisition techniques to enable researchers to deploy MS for more rigorous, high-throughput protein identification, quantitation and structural characterization. With a smaller footprint than previous generations, the new system maintains high-resolution, mass accuracy and spectral quality, and includes new features to extend uptime and improve serviceability.

In addition, the new Thermo Scientific Orbitrap Eclipse Tribrid mass spectrometer provides scientists in academic, government and biopharmaceutical labs with access to a high-performance Orbitrap Tribrid mass spectrometer featuring flexibility and built-in intelligence to drive critical insights and enable technology breakthroughs. The system incorporates important advancements that improve sensitivity over previous generations and expand the ability to characterize and

quantify complex biomolecules and biological systems.

Both new systems can be combined with the Thermo Scientific FAIMS Pro interface, a differential ion-mobility device,offering labs access to a comprehensive solution that improves selectivity and provides increased productivity across a range of proteomics workflows.

Single, high-resolution workflow for monitoring protein therapeutics

The Thermo Scientific HR Multi-Attribute Method (MAM) is designed to meet the demand for a single, high-resolution mass spectrometry-based workflow to directly assess the quality of increasingly complex biotherapeutics. The workflow replaces the complicated sequence of lower-resolution methods that have previously prolonged characterization timelines. Supported by Thermo Scientific Chromeleon Chromatography Data System (CDS) software, the HR MAM method simplifies and standardizes biotherapeutic characterization throughout the product development pipeline, expediting the transition of new drugs from initial research to development and manufacturing.

Software enhancements deliver improved performance, usability and connectivity

New enhancements to Thermo Fisher's leading analytical software solutions now bring Thermo Scientific Compound Discoverer Software, Mass Frontier Software and mzCloud/mzVault libraries together to help customers identify unknown compounds and compare them to known compounds across multiple databases – whether connected to the cloud or offline. Scientists can also benefit from Thermo Scientific TraceFinder Software 5.0, which offers quicker and easier access to important information from Thermo Scientific TSQ Quadrupole and Q Exactive Hybrid Quadrupole-Orbitrap mass spectrometry platforms.

Additionally, the Thermo Scientific Almanac web-based application can be readily integrated by labs, enabling users to remotely access instruments to monitor run status and data acquisition in real time through a browser or mobile device, whether or not they are in the lab.

Events, meetings and workshops at ASMS 2019

Thermo Fisher is hosting several users' meetings and software and breakfast workshops during ASMS 2019.