

# GEN reports on nanotechnology's impact on mass spectrometry

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A move toward smaller and smaller sample sizes is leading to a new generation of mass spectrometry instrumentation, reports Genetic Engineering & Biotechnology News (GEN). From a specific application point of view, novel nanoflow separation methodologies are ramping up the speed and precision with which scientists are able to validate biomarkers, according to the August issue of GEN.

"Basing biomarker validation on more sophisticated mass spec tools could help increase the number of clinical applications for biomarkers," said John Sterling, Editor in Chief of GEN.

Proteome Sciences, for example, performs protein biomarker discovery, validation, and mass spec-based assay development and has introduced commercial assays for Alzheimer's disease. In collaboration with Thermo Fisher Scientific, the company has developed isobaric tagging technology in Tandem Mass Tags that allows users to assay up to six samples per run on the Thermo Orbitrap Velos [mass spectrometry](#) system.

Researchers at the University of North Carolina in Chapel Hill have developed an integrated microfluidic capillary electrophoresis-MS method using data-independent multiplexed fragmentation to perform high-throughput proteomics. The technique could be applied to a bottom-up proteomic approach and for characterization of protein-based biotherapeutics.

Also discussed in the GEN article is work on advanced mass spec techniques taking place at the University of Washington (Seattle) and Leiden University Medical Center in The Netherlands and at companies such as New Objective, Waters, OpAns, Analytical Scientific Instruments, Agilent Technologies, and Dionex.

**More information:** [www.genengnews.com/gen-article ... -ms-to-new-lows/3741](http://www.genengnews.com/gen-article...-ms-to-new-lows/3741)

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