



Technology Spotlight: Mass Spectrometry 2026

August 27, 2026 8am PDT | 11am EDT | 4pm BST | 5pm CEST

Join us for an insightful webinar exploring how advances in mass spectrometry are transforming the 'omics' sciences and enabling researchers to achieve deeper, more comprehensive insights into complex biological systems. From innovations in instrumentation and separation science to ion mobility, tandem mass spectrometry, and computational data analysis, modern workflows are becoming increasingly powerful, integrated, and capable of supporting systems-level biological research.

Through expert-led talks, attendees will explore the latest developments shaping mass spectrometry workflows across proteomics, metabolomics, lipidomics, spatial omics, and related applications. The sessions will highlight how complementary technologies and integrated approaches are improving analytical performance, expanding molecular coverage, and supporting advances in biomarker discovery, disease research, and precision health.

Attend this webinar to:

- Understand the role of mass spectrometry as a foundational technology across multiple 'omics' disciplines
- Explore the latest advances in instrumentation, separation science, ion mobility, tandem mass spectrometry, and computational data analysis
- Gain insight into how integrated mass spectrometry workflows are enabling deeper, systems-level understanding of biological function
- Discover how innovations in mass spectrometry are supporting biomarker discovery, disease research, and the development of precision health approaches

TALK 1

From Molecules to Molecular Systems: Innovations in Mass Spectrometry Shaping 'Omics' Science

Presented by James McCullagh, PhD, Professor of Biological Chemistry, University of Oxford



Mass spectrometry has become a fundamental technology across the 'omics' sciences, enabling researchers to characterise complex biological systems with increasing depth and precision. In this session, Dr James McCullagh will explore why mass spectrometry is central to proteomics, metabolomics, lipidomics, and spatial omics, and how recent advances are expanding its capabilities.

He will discuss innovations in instrumentation, data analysis, separation science, ion mobility, and tandem mass spectrometry, highlighting how these developments are enabling a shift from descriptive molecular profiling toward integrated, systems-level understanding of biology.

Key takeaways:

- Explore mass spectrometry's role across 'omics' science.
- Examine key advances in MS technologies and workflows.
- Discuss how integrated approaches reveal deeper biological insights.
- Highlight applications in disease research and precision health.

TALK 2

Robust and Rugged Quantitation: The Innovations Behind the QSight 500 LC-MS/MS System

Presented by Vladimir Kardelis, PhD, Technical Product Manager, PerkinElmer



Food and environmental laboratories face complex matrices, trace-level contaminants, and increasing demands for reliable, efficient analysis. In this session, Vladimir Kardelis will explore the innovations behind the QSight 500 LC-MS/MS System and how they support robust quantitation across challenging applications.

Using examples from PFAS and pesticide analysis, he will discuss how LC-MS/MS advances can help overcome matrix effects, contamination, sample preparation challenges, and instrument downtime while maintaining consistent performance and reliable results.

Key takeaways:

- Explore key challenges in trace-level food and environmental analysis.
- Examine how LC-MS/MS innovations support robust and reliable quantitation.
- Share practical insights from PFAS and pesticide analysis.
- Discuss approaches for maintaining performance across complex samples and routine workflows.

TALK 3

Enhance Your LC-MS PFAS Analysis with a Nitrogen Generator

Presented by Petra Gierga, Head of Product Management, PEAK Scientific



PFAS analysis presents demanding challenges for laboratories, requiring sensitive and reliable LC-MS workflows. In this session, Petra Gierga will explore the role of nitrogen gas generation in PFAS analysis and how reliable gas supply can support accurate and consistent results.

She will discuss key considerations when selecting a nitrogen generator for LC-MS applications, alongside important laboratory gas safety considerations and practical approaches to supporting robust PFAS workflows.

Key takeaways:

- Explore key challenges in PFAS analysis.
- Examine the role of nitrogen gas in LC-MS workflows.
- Discuss key factors when selecting a nitrogen generator.
- Highlight essential laboratory gas safety considerations.