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Increasing Molecular Coverage in Complex Biological & Environmental Samples Using IMS-MS

Mass spectrometry (MS)-based technologies are playing a growing role in the analysis of complex samples. Despite significant advances in MS technology, currently it is difficult to obtain measurements of both high throughput and high sensitivity for samples with great dynamic ranges such as biofluids and plant extracts. This problem ultimately results in the inability to effectively account for variation among sample conditions and/or biodiversity leading to inconsequential findings for samples which have great variation. To address this challenge, we have coupled an ion mobility separation (IMS) with MS to afford greatly improved measurement throughput, sensitivity, robustness, and quantitative capabilities for rapid analysis of complex samples. The benefits we have observed in omic studies of biological and environmental samples with IMS-MS will be summarized in this presentation.

Host: David Muddiman