ADDENDUM

Discrimination of epimeric glycans and glycopeptides using IM-MS and its potential for carbohydrate sequencing

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After this Article went to press the authors realized that a number of the key references had been inadvertently omitted or removed before the final submission of the manuscript. The authors would therefore like to cite the following additional articles:

1. Zhu, M. L., Bendiak, B., Clowers, B. & Hill, H. H. Ion mobility-mass spectrometry analysis of isomeric carbohydrate precursor ions. *Anal. Bioanal. Chem.* **394,** 1853–1867 (2009).

   Structural characterization of select isomeric oligosaccharides using atmospheric ion-mobility spectrometry for separation of linkage and branch isomers, anomeric isomers, and epimers, prior to MS^3 analysis using an ion-trap mass spectrometer.

2. Williams, J. P. *et al.* Characterization of simple isomeric oligosaccharides and the rapid separation of glycan mixtures by ion mobility mass spectrometry. *Int. J. Mass Spectrom.* **298,** 119–127 (2010).

   Using both travelling-wave ion-mobility spectrometry and drift-tube ion-mobility spectrometry, released N-glycans and isobaric glycans were separated for subsequent characterization by tandem MS. Theoretical modelling was also used to confirm experimentally determined collisional cross-section values.

3. Fenn, L. S. & McLean, J. A. Structural resolution of carbohydrate positional and structural isomers based on gas-phase ion mobility-mass spectrometry. *Phys. Chem. Chem. Phys.* **13,** 2196–2205 (2011).

   Details the collisional cross-section values of ~300 sodiated positional and structural carbohydrate isomers from MALDI IM-MS.

4. Harvey, D. J. *et al.* Travelling wave ion mobility and negative ion fragmentation for the structural determination of N-linked glycans. *Electrophoresis* **34,** 2368–2378 (2013).

   Structural characterization of released N-glycans using negative-ion-mode collision-induced dissociation of ion-mobility-separated isomer (and conformer) precursors.