

**Figure S1: MS**<sup>n</sup> **of N-acetyl glucosamine and glucuronamide.** A, MS<sup>2</sup> spectrum of N-acetyl glucosamine showing losses of one, two and three water molecules. The boxed product ion (m/z 168.065) was targeted for MS<sup>4</sup> analysis. B, MS<sup>4</sup> spectrum of m/z 168 (222.0900@cid30.00 204.0800@cid30.00 168.0600@cid30.00). C, MS<sup>2</sup> spectrum of glucuronamide showing losses of one, two and three water molecules. The boxed product ion (m/z 140.034) was targeted for MS<sup>3</sup> analysis. D, MS<sup>3</sup> spectrum of m/z 140 (194.0600@cid50.00 140.0340@cid25.00). The proposed structure and fragmentation of the dehydrated parent ions are shown. Both spectra were acquired by direct infusion into the Orbitrap Lumos instrument.