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On the cover: Exploring the mechanisms of glucose-stimulated insulin secretion with advanced omics technologies. We aimed at identifying novel signaling pathways involved in the initial release of insulin from pancreatic  $\beta$ -cells after glucose stimulation using iTRAQ-labeling combined with enrichment of phosphorylated peptides and formerly sialylated N-linked glycopeptides and high-accuracy mass spectrometry. Protein phosphorylation, alteration in sialylated N-linked glycosylation was observed on a number of surface proteins. The proteins important for cell-cell interaction, cell movement, cell-ECM interaction and Focal Adhesion were found regulated at the level of sialylation, but not in protein expression. This comprehensive PTMomics analysis will be useful to help further decipher the molecular networks underlying the temporal regulation of insulin secretion. For details see the article by Taewook Kang, *et al*, pages 95–110.

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