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Tremendous progress in the comprehensive understanding of protein functions has been made in the past few years since the establishment of the Human Genome Project. However, most proteins play characteristic biological roles after modification with carbohydrate chains during their biosyntheses.

Japanese scientists have discovered many glycogenes, i.e., genes responsible for the synthesis of carbohydrate chains, and hold the leading edge in glycobiology. Based on this background, extensive investigations have started for comprehensive analysis of glycoconjugates to elucidate the functions of carbohydrate chains (i.e., glycoproteomics).

In the first session of this symposium, topics on the analytical methodologies for carbohydrate-protein interactions, mass spectrometry of glycoprotein pharmaceuticals, and rapid analysis of carbohydrate chains are presented. In the second part, three topics on some biological aspects of proteoglycans, carbohydrate-recognizing proteins, and glycogenes are presented.