

1. Record Nr.	UNINA9910782894103321
Titolo	Experimental glycoscience Glycochemistry [[electronic resource] /] / N. Taniguchi ... [et al.] (eds.)
Pubbl/distr/stampa	[Tokyo] ; ; New York, : Springer, c2008
ISBN	1-282-03839-7 9786612038396 4-431-77924-8
Edizione	[1st ed. 2008.]
Descrizione fisica	1 online resource (259 p.)
Altri autori (Persone)	TaniguchiNaoyuki <1942->
Disciplina	572.565
Soggetti	Glycoconjugates Oligosaccharides
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and indexes.
Nota di contenuto	Structural Analysis of Sugar Chains -- Chemical Liberation of N-linked Oligosaccharides from Glycoproteins -- Release of N-glycans by Enzymatic Methods -- Release of O-glycans by Chemical Methods -- Release of O-glycans by Enzymatic Methods -- Ceramidase and Related Enzymes -- Labeling of Oligosaccharides -- Chemical Labeling of Sialyloligo/polymer -- Separation of Oligosaccharides by 2D HPLC -- Analysis of Oligosaccharides by Capillary Electrophoresis -- Energy-Resolved Mass Spectrometry (ERMS) of Oligosaccharide -- LC/MS of N-Linked Oligosaccharides -- Convenient Structural Characterization of Intact Glycosphingolipids by MALDI-TOF Mass Spectrometry with Increased Laser Power and Cooling Gas Flow -- Structural Analyses of Glycoconjugates by NMR -- Sugar Chain Analysis by Enzymatic Digestion and 2D Mapping by HPLC -- Analysis of Binding Sites of Sugar Chains by Methylation Analysis -- Glycan Profiling -- Monoclonal Antibody as a Clue to Structural Analysis of Bioactive Functional Glycoconjugates -- Microsequencing of Functional Chondroitin Sulfate Oligosaccharides -- Structural Characterization of PA-oligosaccharide Isomers Derived from Glycosphingolipids by MALDI-TOF Mass Spectrometry -- Structural Analysis of Phospho-Glycosphingolipids in Lower Animals -- Structural Analysis of Polysialic Acid -- Milk Oligosaccharides: Structural Characterization and Future Aspects -- An

XML Description of Carbohydrate Structures -- Construction of a Diagnostic Library for Glycans Using Multistage Tandem Mass Spectrometry (MS<sup>n</sup>) -- A Method for Large-Scale Analysis for N-linked Glycoproteins by the Glycosylation Site-Specific Stable Isotope-Labeling and LC/MS Shotgun Technology -- Mass Spectrometry of Glycopeptides -- Development of MS Method for the Analysis of Sugar Peptide -- Calculations for Saccharides by the Use of MS Data -- Molecular Modeling of Oligosugar Structures -- Prediction of Sugar-Binding Sites on Proteins -- Frontal Affinity Chromatography: An Effective Analytical Tool for Protein-Sugar Interaction -- Analyses of Sugar-Protein Interactions by NMR -- Surface Plasmon Resonance and Sugar Chip Analysis for Sugar Chain-Protein Interactions -- Analysis of Interactions Between Carbohydrates and Proteins Using Capillary Affinity Electrophoresis -- Equilibrium Dialysis -- Interaction Assay of Oligosaccharide with Protein Using Fluorescence Polarization (FP) and Fluorescence Correlation Spectroscopy (FCS) -- Development of Neoglycoconjugate Probes and Detection of Lectins -- Chemical Synthesis of Sugar Chains -- Synthesis of Glycolipid and Its Application -- Chemo-Enzymatic Synthesis of Glycoconjugates -- Construction of O-Linked Glycopeptide Library Using Human Glycosyltransferases -- Alteration of N-Linked Oligosaccharides -- Stationary Solid-Phase Reaction (SSPR) for Oligosaccharide Synthesis -- Sugar Chain Synthesis by the Use of Cell Functions -- Glyco-Chemistry Cycle System Based on Glycosidases -- Endoglycosidases (Glycosaminoglycans) -- Oligosaccharide Synthesis Based on Combinatorial Chemistry and Labo Automation -- Endoglycosidases (Glycoproteins) -- Glycosaminoglycans -- Recent Advances in the Production of Mammalian-Type Sugar Chains in Yeast -- Solid-Phase Synthesis of Glycopeptides -- Efficient Synthesis of Oligosaccharides and Synthesis of Pathogen-Associated Molecular Patterns for Their Biofunctional Studies -- Sugar Polymers (Dendrimers and Pendant-Type Linear Polymers) -- Rapid Synthesis of Oligosaccharides: Resin Capture-Release Strategy.

---

#### Sommario/riassunto

The aim of this book is to provide experimental protocols covering many aspects of glycobiology, glycotecchnology, and chemistry: biochemistry, molecular and cellular biology, genetics, physiology, and medicine. The protocols are all self-contained descriptions of the equipment and reagents needed, followed by details of the experimental procedure. In the post-genomic era, glycobiology is coming of age because more than half of proteins are glycosylated and the importance of sugar chains in various fields of life science research cannot be disregarded. Many scientists had not entered this area because glycobiology and glycoscience used to be considered difficult fields. This book, therefore, is presented much like a cookbook which can help scientists in fields other than glycobiology and glycoscience carry out research more easily.

---