

Contents

Preface	iii
Contributors	vii
1. An Introduction to Glycoproteins <i>O. P. Bahl</i>	1
2. Nomenclature of Monosaccharides, Oligosaccharides, and Glycoconjugates <i>Edward C. Kisailus and Howard J. Allen</i>	13
3. Methods of Carbohydrate Analysis and Structural Determination: Chemical and Enzymatic Methods <i>Akira Kobata and Kiyoshi Furukawa</i>	33
4. Nuclear Magnetic Resonance Approaches to Oligosaccharide Structure Elucidation <i>Anthony S. Serianni</i>	71
5. Mass Spectrometry of Carbohydrates <i>Roger A. Laine</i>	103
6. Synthetic Glycoconjugates <i>Y. C. Lee and Reiko T. Lee</i>	121
7. Proteoglycans: Structure, Synthesis, Function <i>V. P. Bhavanandan and E. A. Davidson</i>	167

8.	Glycolipids: Structure, Synthesis, Functions <i>Samar K. Kundu</i>	203
9.	The Biosynthesis of Serine (Threonine)- <i>N</i> -Acetylgalactosamine-Linked Carbohydrate Moieties <i>Harry Schachter and Inka Brockhausen</i>	263
10.	Synthesis of Asparagine-Linked Oligosaccharides: Pathways, Genetics, and Metabolic Regulation <i>Richard D. Cummings</i>	333
11.	Recent Advances in the Development of Potential Inhibitors of Glycosyltransferases <i>Shaheer H. Khan and Khushi L. Matta</i>	361
12.	Function of Carbohydrate Moieties: Membrane and Nonsecretory Glycoproteins <i>Minoru Fukuda</i>	379
13.	Function of the Carbohydrate Moieties of Secretory Glycoconjugates <i>Kenneth Olden, Tet-Kin Yeo, and Kiang-Teck Yeo</i>	403
14.	Mechanisms and Control of Glycoconjugate Turnover <i>Paul H. Weigel</i>	421
15.	Molecular Biology of Glycosyltransferases and Glycosidases <i>Joseph T. Y. Lau and Terrance P. O'Hanlon</i>	499
16.	Plant Lectins: Molecular Biology, Synthesis, and Function <i>Marilynn E. Etzler</i>	521
17.	Microbial Lectins <i>Nechama Gilboa-Garber and Nachman Garber</i>	541
18.	Invertebrate Lectins: Distribution, Synthesis, Molecular Biology, and Function <i>Gerardo R. Vasta</i>	593
19.	β -Galactoside-Binding Vertebrate Lectins: Synthesis, Molecular Biology, Function <i>Reuben Lotan</i>	635
	Index	673