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(SPG) Analogues and Derivatives; 2.2.3 Selectin Ligands; 2.2.3.1 Sialyl Lewis x; 2.2.3.2 Novel 6-Sulfo sLe(x) Variants; 2.2.4 Siglec Ligands; 2.2.4.1 Chol-1 (-Series) Gangliosides 2.2.4.2 Novel Sulfated Gangliosides 2.3 Toxin Receptor; 2.4 Summary and Perspectives; 2.5 References; 3 The Chemistry of Sialic Acid; 3.1 Introduction; 3.2 Chemical and Enzymatic Synthesis of Sialic Acids; 3.3 Chemical Glycosidation of Sialic Acids; 3.3.1 Direct Chemical Sialylations; 3.3.1.1 2-Chloro Derivatives as Glycosyl Donors; 3.3.1.2 2-Thio Derivatives as Glycosyl Donors; 3.3.1.3 2-Xanthates as Glycosyl Donors; 3.3.1.3 2-Phosphites as Glycosyl Donors; 3.3.1.4 Miscellaneous Direct Chemical Methods; 3.3.2 Indirect Chemical Methods with the Use of a Participating Auxiliary at C-3 4.3.2 Immobilization of the Glycosyl Donor 4.3.3 Bi-directional Strategy; 4.4 Support Materials; 4.4.1 Insoluble Supports; 4.4.2 Soluble Supports; 4.5 Linkers; 4.5.1 Silyl Ethers; 4.5.2 Acid- and Base-Labile Linkers; 4.5.3 Thioglycoside Linkers; 4.5.4 Linkers Cleaved by Oxidation; 4.5.5 Photocleavable Linkers; 4.5.6 Linkers Cleaved by Olefin Metathesis; 4.6 Synthesis of Oligosaccharides on Solid Support by Use of Different Glycosylating Agents; 4.6.1 1,2-Anhydrosugars - The Glycal Assembly Approach; 4.6.2 Glycosyl Sulfoxides; 4.6.3 Glycosyl Trichloroacetimidates; 4.6.4 Thioglycosides 4.6.5 Glycosyl Fluorides

Sommario/riassunto

To exploit the full potential of this diverse compound class for the development of novel active substances, this handbook presents the latest knowledge on carbohydrate chemistry and biochemistry. While it is unique in covering the entire field, particular emphasis is placed on carbohydrates with pharmaceutical potential. Topics include the following: > Chemical Synthesis of Carbohydrates > Carbohydrate Biosynthesis and Metabolism > Carbohydrate Analysis > Cellular Functions of Carbohydrates > Development of Carbohydrate-based Drugs A premier resource for carbohydrate chem