

|                         |   |
|-------------------------|---|
| 1. Record Nr.           | UNINA9911019439603321   |
| Titolo                  | Carbohydrate-based drug discovery // Chi-Huey Wong (ed.)  |
| Pubbl/distr/stampa      | Weinheim ; ; [New York], : Wiley-VCH, c2003   |
| ISBN                    | 9786610520725<br>9781280520723<br>1280520728<br>9783527605781<br>3527605789<br>9783527602438<br>3527602437  |
| Descrizione fisica      | 1 online resource (981 p.)  |
| Altri autori (Persone)  | WongChi-Huey  |
| Disciplina              | 615/.7  |
| Soggetti                | Carbohydrate drugs<br>Carbohydrates - Synthesis<br>Glycoconjugates - Physiological effect   |
| 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 index.  |
| Nota di contenuto       | Carbohydrate-based Drug Discovery; Contents; Preface; List of Contributors; Volume 1; 1 Synthetic Methodologies; 1.1 Introduction; 1.2 Tactical Analysis for Overall Synthetic Efficiency; 1.3 Methodological Improvements; 1.3.1 Chemistry; 1.3.2 Protecting Group Manipulations; 1.3.3 Modulation of the Reactivity of Glycosyl Donors; 1.3.4 Block Synthesis; 1.4 Accessibility; 1.4.1 Solution-based Chemistry; 1.4.2 One-Pot Glycosylation; 1.4.3 Solid-Phase Chemistry; 1.4.3.1 Fundamentals of Solid-Phase Oligosaccharide Synthesis; 1.4.3.2 The Support; 1.4.3.3 Linkers to the Support<br>1.4.3.4 Protecting Groups used in Solid-Phase Oligosaccharide Synthesis<br>1.4.3.5 Solid-Phase Oligosaccharide Synthesis; 1.4.3.6 Monitoring of Reaction Progress; 1.4.4 Automation; 1.5 Concluding Remarks; 1.6 References; 2 Complex Carbohydrate Synthesis; 2.1 Introduction; 2.2 Synthetic Gangliosides; 2.2.1 Gangliosides GM4 and GM3, and their Analogues and Derivatives; 2.2.2 Sialylparagloboside |

(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 DrugsA premier resource for carbohydrate chem

---