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Nota di contenuto	Cover; Title Page; Copyright; Contents; Foreword; Preface; List of Contributors; 1 De Novo Approaches to Monosaccharides and Complex Glycans; 1.1 Introduction; 1.2 De Novo Synthesis of Monosaccharides; 1.3 Iterative Pd-Catalyzed Glycosylation and Bidirectional Postglycosylation; 1.3.1 Bidirectional Iterative Pd-Catalyzed Glycosylation and Postglycosylation; 1.3.2 Synthesis of Monosaccharide Aminosugar Library; 1.4 Synthesis of Monosaccharide Azasugar; 1.5 Oligosaccharide Synthesis for Medicinal Chemistry; 1.5.1 Tri- and Tetrasaccharide Library Syntheses of Natural Product 1.5.2 Anthrax Tetrasaccharide Synthesis1.6 Conclusion and Outlook; 1.7 Experimental Section; List of Abbreviations; Acknowledgments; References; 2 Synthetic Methodologies toward Aldoheptoses and Their Applications to the Synthesis of Biochemical Probes and LPS Fragments; 2.1 Introduction; 2.2 Methods to Construct the Heptose Skeleton; 2.2.1 Olefination of Dialdoses Followed by Dihydroxylation; 2.2.1.1 Olefination at C-5 Position of Pentodialdoses; 2.2.1.2 Olefination at C-1 Position of Hexoses; 2.2.1.3 Olefination at C-6 Position of

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2.3.4 The Crich's Stereoselective -Glycosylation Applied to the Synthesis of the Repeating Unit of the Lipopolysaccharide from *Plesimonas shigelloides*  
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3.2 Glycosyl Hydrazides (1-(Glycosyl)-2-acylhydrazines)

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## Sommario/riassunto

The fields of glycochemistry and glycoscience are rich and varied and where much can be learned from Nature. As Nature is not always able to produce carbohydrates in quantities useful for not only in research but also as therapeutic agents, new ways need to be found to optimize the yield. This book presents an overview of the latest developments in the field of carbohydrates, ranging from de-novo approaches via cyclodextrin chemistry to the synthesis of such highly complex glycoconjugates as glycosphingolipids and GPI anchors. The main emphasis remains on the synthetic aspects making t

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