Solid Support Oligosaccharide Synthesis and Combinatorial Carbohydrate Libraries. By P. H. Seeberger. Wiley Interscience: New York, **2001**, hardback £ 71.50, ISBN 0-47-137828-3, 308 pp.

Remarkable progress has been made both in the rapid assembly of complex polysaccharides and in methods to make them. This book covers the latest developments in both Glycobiology and Glycolipid chemistry. The three major classes of biopolymers found are proteins, nucleic acids and polysaccharides. Over the last couple of years much scientific curiosity and research has been focused on the former two areas, but little attention has been focused on the latter. This book makes an attempt to address some of these concerns and also bring both synthetic and medicinal chemists up to speed with the latest developments in oligosaccharide chemistry.

This book comprises of twelve chapters, each chapter written by an eminent author. Each author either describes the most recent advances in an area of glycobiology or talks about the recent advances in oligosaccharide and carbohydrate chemistry coming out of his laboratory. However one disadvantage of this approach is that the book lacks continuity from one chapter to another.

The first chapter written by Peter Seeberger, the editor, gives us a historical perspective on carbohydrate chemistry and quickly brings us up to date with recent developments in the field of glycobiology and glycoconjugate chemistry. Chapter two (written by Cirillo and Danishefsky) deals with the synthesis of oligosaccharides and glycoconjugates by the glycal assembly method. They attempt to show that the synthesis of complex oligosaccharides can be broken down into a simple iterative procedure of protections and deprotections. However to my disappointment they did not highlight both the challenges of such a synthesis and the problems of purification involved in such an operation. Of particular interest to me was the chapter written by Simanek and Wong on the programmable one pot synthesis of carbohydrate libraries using thioglycosides. They were able to use an orthogonally protected carbohydrate core for the rapid assembly of oligosaccharides. The key element of their strategy is the use of donors whose reactivity decreases over the course of the reaction. Thus they could start glycosylations at the non reducing end and perform glycosylations up to the reducing end.

Except a few typographical errors, typesetting is excellent and the illustrations are very well done. The references are certainly up to date with a couple of them in 2000. This book further elaborates the advent of combinatorial technology of carbohydrates and encourages medicinal chemists to design a robust synthesis to exploit carbohydrate epitopes of immense biological importance. This would be a valuable addition to the reference literature. To date, both the pharmaceutical and biotech sectors have not been able to produce conditions beneficial to tap such a wide pool of structural diversity to further augment their compound collections and also further their chances of producing drug like molecules. By offering different orientations (α or β) and different sites of attachment it would be possible to greatly enhance the diversity pool of compound available for screening. For medicinal chemists I would recommend buying this book as a necessity as it would provide both a broader perspective on oligosaccharide and combinatorial carbohydrate chemistry and also help them implement greater structural diversity in their chemistries.

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