

Book reviews

“Antisense Drug Technology. Principles, Strategies, and Applications”

Stanley T. Crooke (Editor), Marcel Dekker, New York; 2001, 929 pages, \$ 225; ISBN 0-8247-0566-1

The question is: does antisense technology really work? The editor of this volume thinks that the information provided in this multi-author work provides sufficient justification for cautious optimism in answering this question. As he also notes, however, there are certainly still many more questions than there are answers. We are indeed at the beginning of this relatively new technology, which – in theory – would offer dramatic therapeutic advantages. Let's see what this book has to offer.

It is a long volume, divided into three parts. The first part is the introduction, and contains an introductory chapter about basic principles of antisense technology. This is followed by chapters on the medicinal chemistry of antisense oligonucleotides, their analytical methods, and methods of selecting sites of antisense targeting. These chapters make very interesting, relevant reading of the basics of antisense technology. Part 2 is entitled ‘Properties of phosphorothioate oligonucleotides’, and contains chapters about pharmacokinetic behaviour in animals and humans, toxicity and clinical safety, as well as general pharmacology, which are described in a lot of experimental detail. Part 3 is the longest part of the book and is called ‘Properties of advanced novel clinical classes of oligonucleotides’. Each chapter is a specific example, which is described in substantial detail. It is certainly very pharmacologically and cell-biologically orientated. There is hardly anything about the formulation and delivery of antisense oligonucleotides, but I suppose this just reflects the little work that has been done in this area. Hardee et al.'s chapter on new delivery routes and formulations is certainly well worth reading and includes summaries of the major efforts in this area. Otherwise, the book is mostly of general background utility for the pharmaceutical formulator.

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“Pharmaceutical and Medical Applications of Near-Infrared Spectroscopy. Practical Spectroscopy Series Volume 31”

Emil W. Ciurczak, James K. Drennen III, Marcel Dekker, New York; 2002, 192 pages, \$ 135, ISBN 0-8247-9453-2

The application of near-infrared spectroscopy in pharmacy has blossomed during the last 10 years. As the authors to this book note in their preface, the near-infrared region of the spectrum was first discovered in 1800. Considering the only recent exploitation of this spectral-band, near-infrared spectroscopy certainly cannot be called an overnight success. This book certainly provides a basic introduction to this spectroscopic method. It is, perhaps, a little bit weak on the technical side, but otherwise is comprehensive in its coverage.

The first chapter describes the theory of near-infrared spectroscopy, going back again to that year of 1800 when the near-infrared band was discovered by a lunch time accident. This chapter is brief, succinct and readily understandable. I was a bit disappointed with Chapter 2, which concerns instrumentation. The different types of near-infrared instrument are described. However, it gives no information about current manufacturers. If I wished to purchase a near-infrared machine, I would not know where to turn! A list of current manufactories would certainly have been very advantageous to this chapter.

The rest of the book is devoted to numerous examples of the use of infrared spectroscopy. There are chapters on content uniformity analysis, granulation, drying and coating, pharmaceutical assays, and some medical applications. These chapters are clearly written, well referenced and a good place to start for someone new to the field.

This is a useful book, simply written and easy to understand. If you are wondering about possible application of near-infrared spectroscopy for one of your projects, then this is a good place to start.

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