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Book reviews

Modified-Release Drug Delivery Technology

M. Rathbone, J. Hadgraft and M. Roberts (Eds.); *Drugs and the Pharmaceutical Sciences*, Vol. 126; Marcel Dekker, New York, Basel, 2003; 975 pages, ISBN 0-8247-0869-5 (\$ 195)

This latest volume from the series *Drugs and the Pharmaceutical Sciences* is a fine collection of chapters covering the various approaches currently being used to achieve modified-release drug delivery in pharmaceutics. Although comprehensive in its attempt, it is inevitable that a multi-authored work of size will be of greatly varying quality. The book's 80 chapters suffer—in places quite severely—from this problem, but do succeed in giving an extremely useful overview of the major and minor developments in the field of controlled-release drug technology.

The book is divided into parts, each of which addresses a particular route of drug absorption. In Part I, oral drug delivery is considered in detail. After an introductory overview of oral modified-release delivery systems, we find chapter after chapter of individual, specialist delivery systems for all application. With all respect to the undoubted novelty and usefulness of many of these systems, I do admire some of the wonderful copyright names given to some of them. For example: Procise (a drug delivery system based on geometric configuration), Ringcap (a banded tablet), Smartrix (erosion-controlled), Theriform (layer-by-layer technology), Accudep (dry powder deposition), Dissocubes (nano-suspensions), etc. These minor technologies are all pulled together in this first section. In Part II, we are given a roller-coaster ride through colonic drug delivery systems. I liked the clearly written chapters from Clive Wilson; and Gordon Amidon's 0-order sustained release system makes interesting reading. We turn in Part III to ocular delivery system and find ourselves in a world of the acronyms such as NODS (New Ophthalmic Delivery System) and the BODIs (Bioadhesive Ophthalmic Drug Inserts). The oral mucosa, the poor relation of delivery systems, is considered comprehensively in Part IV. This covers such classical systems as micro-particles and medicated chewing gum, but also includes things such as Periochips and other acronym-things called S-DBMP-Ts and BCTs. Dermal and transdermal are described in detail in Part V. John Hadgraft gives his usual good overview of transdermal technology. The following chapters deal with all possible aspects of current dermal and transdermal research, including micro-needles, and Gregor Cevcs' Transfersomes. Of interest to me were the chapters on needle-free drug

delivery and the dermal PowderJect device. I also particularly like Part VI of the book concerning injections and implants. The nine chapters here cover a number of fascinating new developments in this field. At the risk of being tedious, I cite just Depofoam technology, Medipad systems, and SAIB (sucrose acetate iso butorate) systems. Two chapters on nasal drug delivery are brief, but give an interesting overview of this drug delivery route. The same applies to genital drug delivery in Part VIII. Part IX concerning pulmonary drug delivery is, as one might expect, of substantial size. Commercial systems are described such as AERx technology, inhalers at powder inhalation systems, the Spiros inhaler, and of course the Respimat. An excellent brief chapter by Toni Hickey and others described formulation challenges for inhalation powders, and also delivery of protein powders by inhalation. This book also has color illustrations, some of which evidently are originally taken direct from advertising and marketing, which tends to limit their scientific merit. All the same, I find this book to be extremely useful. It is highly valuable as a teaching aide, or for advanced undergraduate students, to give them some idea of the broadness of approach used in modern drug delivery systems. It is also a valuable source of information about the numerous commercial systems currently under investigation. If I hadn't been asked to review this book, I would certainly have bought it for my Departmental library. My recommendation? Despite the greatly variable quality, you must have it!

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Surfactants and Polymers in Drug Delivery

Drugs and the Pharmaceutical Sciences, vol. 122; Martin Malmsten (Ed.); Marcel Dekker, New York, Basel, 2002, 336 pages; ISBN 0-8247-0804-0 (US\$ 165)