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Book reviews

Prediction of Percutaneous Penetration
K. Brain, V. James, K. Walters (Editors) STS Publishing, Cardiff; 318 pp.; £120; ISBN: 0-948917-10-5

Anyone wondering what the current state of research is in the field of topical drug delivery is well advised to follow the progress of the Prediction of Percutaneous Penetration Conferences. I contributed myself once, and so am aware of the value of such specialist meetings. Although I have grown rather sceptical about the future and relevance of transdermal research, I am impressed by the wide range of potentially relevant topics covered in this volume. Of course, all of the big names are here: Richard Guy presents his usual summary of recent progress in his laboratories and John Hadgraft presents a large number of papers. I especially like Mike Roberts articles, as his work always appears to me to be of relevance for pharmaceutical practice. This book contains all together some 80 abstracts each of 3 or 4 pages, so the reader can obtain detailed information about the results of each project.

This volume of proceedings belongs in every pharmaceutics library where research into topical drug delivery is been done. Only few articles are of interest to the industrial pharmacist seeking to develop transdermal systems. This book is an extremely valuable source of information about the current effort in finding new relevance for the skin as a barrier. I recommend all the volumes in this series to university researchers working in this area. They should have the complete set.

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Ocular Therapeutics and Drug Delivery
I.K. Reddy (Editor); ISBN: 1-56676-213-8

In the last couple of years books about ophthalmic drug delivery have been published with a surprising frequency. One of the reasons for this frequency is the fact that designing drug delivery systems for the eye is an incredibly difficult task. Hence the market may be ready to absorb more books on ophthalmics than on other topics. Indeed, the development of modern ocular drug delivery systems is complex and interdisciplinary.

The newest book covering ophthalmic delivery, 'Ocular Therapeutics and Drug Delivery' edited by I.K. Reddy, is mirroring this complexity and interdisciplinarity. The book contains 19 chapters and begins, as it should, with fundamental aspects and moves to the applied. The first chapter gives an overview over the topic. The book continues with chapters about surface chemical aspects of ocular delivery, biological barriers to ocular delivery, pharmacokinetic and pharmacodynamic correlations of ophthalmic drugs, drug metabolizing enzyme systems in the eye, artificial tear formulations, irrigating solutions and contact lens products, clinical pharmacology of the anterior segment of the eye, recent developments in anti-glaucoma drug research, vitreoretinal diseases: pathological aspects and therapeutic strategies, prodrugs: a chemical approach to ocular drug delivery, the use of retrometabolic drug design concepts in ophthalmic drug discovery, development of soft drugs for ophthalmic use, topical ophthalmic formulations: basic considerations, polymers in ophthalmic drug delivery systems, microparticulates as an ocular delivery system, protein and peptide drug delivery for the eye, evaluation of primary ocular irritation: alternatives to the draize test, packaging aspects of ophthalmic products, and finally, a brief history of drug regulation and regulatory issues governing ophthalmic products: a biopharmaceutic perspective.

As reflected by this listing of the chapters, the book is a comprehensive text that covers most of the issues important for the eye. Indeed, it gives a good review of the above listed aspects. It is, however, less practically oriented and less 'hands on' than the classic book on ophthalmic preparations 'Ophthalmica' by Dolder and Skinner that was issued by APV. Therefore, the new book is of less value than the classic for the pharmacist involved in the formulation of ophthalmics. On the other hand, it covers most of the latest developments in ophthalmics and related basics, of course with a time

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gap that is typical for books and largely unavoidable of about 2 years. For this reason, this comprehensive, interdisciplinary text is a must for those involved in the development and teaching of ophthalmic preparations.

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Pharmacokinetics: Regulatory-Industrial-Academic Perspectives.
Edited by P.G. Welling and F.L.S. Tse. Marcel Dekker, 270 Madison Avenue, New York, NY10016, 512 pages.

The objective of the book is to present the latest concepts and developments in the area of pharmacokinetics from the perspective of those actively working in this field. It is the second edition of this book, first published in 1988. As compared to the first edition, there is greater emphasis on topics that are rapidly changing within the dynamic framework of the application of pharmacokinetic principles to drug development, although some components of classical pharmacokinetics and metabolism have been retained.

The first chapter addresses the central issue of good laboratory practice regulations, as applied to pharmacokinetics.

The next four chapters address methods of assessing drug absorption:

- Methods to assess absorption in drug discovery
- Drug delivery systems: effects of pharmacokinetics on design, evaluation, and production
- Peptide and protein drug delivery
- Membrane transport.

The next section discusses various aspects of drug distribution:

- Blood-brain barrier permeability: pharmacological implications with special emphasis on peptides
- Modelling of relationships between pharmacokinetics and pharmacodynamics
- Spatial imaging of radioactivity in animal tissues and organs.

It is followed by two chapters on recent advances in drug metabolism methodology:

- Recent developments in drug metabolism methodology
- Hepatic microsomes and heterologous expression systems as in vitro models for human drug metabolism.

The next chapters focus on drug development:

- Integration of pharmacokinetics into drug discovery and development: the alternative approaches
- Pharmacokinetics in drug discovery and development: non clinical studies
- Pharmacokinetics in drug discovery and development: clinical studies
- Population pharmacokinetics and pharmacodynamics.

The book concludes with regulatory perspectives of bioavailability and bioequivalence issues:

- Bioavailability and bioequivalence of oral controlled-release products: a regulatory perspective
- Statistical considerations for bioavailability/bioequivalence studies.

Overall the chapters are well written, and the goal of the editors 'to present the latest concepts in the most rapidly changing areas in the broad discipline of pharmacokinetics' can be considered to have been largely achieved. The chapters are generally well documented by a vast and uptodate bibliography.

The only regret of the reviewer is that its orientation is very much North American. Among the 22 authors only three are European. This has as a consequence that chapters with strong regulatory components such as 'Good laboratory practice' and 'Bioavailability and Bioequivalence' reflect essentially the views of the US Food and Drug Administration. It also possibly explains why issues considered as important in Europe such as pharmacogenetics in drug development are only marginally discussed.

Such minor distortions should, however, not diminish the value and interest of the book which should be useful to all scientists actively involved in the use of pharmacokinetics in the process of drug discovery and development.

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