ELSEVIER

European Journal of Pharmaceutics and Biopharmaceutics 44 (1427) 103–106

European Journal of Pharmaceutics and Biopharmaceutics

Book reviews

Respiratory Drug Delivery. Volume V. Program and Proceedings
R. Dalby, P. Byron and S. Farr (Editors), Interpharm Press, Buffalo Grove, IL, USA, 1996. 434 pages; US$175.00. ISBN 1-57491-018-3

The publishers have done a wonderful job by bringing out this book of proceedings less than a month after the conference took place. This ensures that the research papers published here are not even one year old. This book contains some 33 conference papers of full length, as well as 47 poster abstracts covering the complete field of modern respiratory drug delivery. Thus, we read contributions about dosing variability in vivo and in vitro, gene delivery and regulation, dry powder inhaler development, pressurized inhaler development, the delivery of macro molecules, new issues and innovations in aerosol science, and the testing of aerosol systems. The authors come from both industry and universities, and present here work of excellent standard that is highly relevant to modern pharmaceutics. At the risk of writing only a very short review of this book, I recommended it to all researchers who are looking for a summary of the present state of research in aerosols. This is a superb volume that is of great use to the researcher in the field.

Geoffrey Lee
Friedrich-Alexander Universität
Erlangen-Nürnberg
91 058 Erlangen
Germany

PII S0939-6411(97)00042-8

Pharmaconkinetic Analysis—A Practical Approach
P.I.D. Lee and G.L. Amidon, Technomics, Lancaster/Basel, 1996. ISBN 1-56676-425-4

It is good to have a standpoint, and a new standpoint may reveal a coherent picture, where there was nothing but unstructured detail before. The authors propose the 'time constant approach' as such a unifying view of pharmacokinetics and blopharmaceutics. Time constants are computed as ratios of AUMCs and AUCs, they are mean residence times. It is impressive to see how this concept is elaborated and applied to a variety of problems.

The scope is outlined by the division into four sections entitled 'Basics and Methods', 'Formulation Factors', 'Absorption, Distribution, Metabolism, and Pharmacodynamics', and 'Special Populations', and the 15 chapters of Sections 2–4 have a common structure with headings 'Introduction', 'Pharmacokinetic Models', 'Case Studies', 'Examples', and 'References'.

Such a rigorous organization can make a book repetitive and dull, but this one is fascinating to read and elucidates many facets of the complex structure it displays.

This is not to say that the reviewer would agree on all points. Some major objections shall be mentioned.

In the introduction the authors propose 'time' as a sensible unit. When pharmacokinetics are discussed from the point of view of 'time', it makes subjects easy to understand. For example, it is more comprehensible to say, 'it takes 3 h for a drug to be absorbed', than to say 'the absorption rate constant of a drug is 0.333 h^{-1}.'

As far as the ease of understanding is concerned, this is certainly correct, but, even disregarding numerics, the content of the two statements is not the same. The latter implies that we are talking about a first order process, and the former does not mention, which degree of completion is achieved within 3 h—probably not 100%, and whether there was an initial lag time. In contrast to many processes involved in the kinetics of disposition, the time course of drug release and absorption frequently resists categorization into simple kinetic orders or parametrizable residence time distributions. Still, the shape of the absorption profile may contain valuable information concerning factors limiting the extent of bioavailability.

The value of AUMC/AUC depends to a large extent upon the exact value of the expolation of AUMC and hence upon the estimate of the terminal rate constant, which may be difficult to obtain in practice.

The way used here to circumvent this problem is to average plasma level curves from different subjects. In