

Book Reviews

Advances in Pharmaceutical Sciences Volume 7

Edited by David Ganderton, Trevor Jones

and James McGinity

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The intention of *Advances in Pharmaceutical Sciences, Volume 7*, as stated in the preface, is to present critical evaluations of current research and development in selected fields of pharmaceutical technology. It achieves this admirably. The topics are timely and the reviews are thorough and detailed.

There are two contributions related to materials and processing. The contribution by Rowe & Roberts on the mechanical properties of powders shows how far and how quickly a materials science approach has been adopted by workers in this area. Pharmaceutical materials are no longer regarded as being different, they can be examined and characterized by techniques used for "normal" materials. Rowe & Roberts themselves have been one of the main instigators in arguing for this more rational approach, and their own work is, naturally, extensively referred to. As well as detailed descriptions of the theory and practice of the techniques used, the extensive collection and comparison of data from different authors is especially valuable. Although this data is interesting in itself, its major value is in understanding processing behaviour, in formulation and solving problems. Thankfully, the authors do not shy away from applications.

The second contribution related to materials and processing is by Kristensen on particle agglomeration. Much research in this

area has been of limited general application. The author reviews research on the fundamentals of agglomeration concentrating on mechanisms and liquid requirements. The majority of the applied studies reviewed are on high shear mixer-granulators, although there is a short section on melt granulation. The review demonstrates clearly how far the study of processes such as granulation have moved away from empiricism.

The chapter by Nairn deals with coacervation-phase separation technology, as used, for example in preparation of pharmaceutical microcapsules. This section is somewhat different than the others in that it gives a highly detailed account of the process as well as reviewing current literature. The fact that there are several different processes, each subject to a large number of variables, which are reviewed in depth, doesn't make for light reading. Nonetheless, this is a comprehensive review, essential for anyone working in this area.

The design of drug delivery systems does not simply consider processing and formulation but must take into account the required kinetics. Aspects of this, related to prolonged action in the eye, are dealt with by Uruti. Delivery to the eye is not a subject that is extensively covered in the literature, so the contribution is all the more welcome for that. The basic principles of ocular pharmacokinetics is followed by a comprehensive discussion of the relationship between the design of a delivery system and the kinetics. This is not a book for the beginner. For those who have a good basic knowledge and wish to be brought up to date or for those actively working in the fields covered, the contributions in this book are essential reading.

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Book Reviews

Progress in Drug Research

Fortschritte der Arzneimittelforschung

Progrès recherches pharmaceutiques

(PDR Volume 45)

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388 pages

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This well-established series is now in its 37th year and with recent volumes appearing twice yearly, the present volume is the 45th. As the editor has had a consistent policy of commissioning chapters that are critical informative essays on topical aspects of drug research rather than exhaustive literature reviews, these volumes provide a valuable library of use to the research worker for many years after their first appearances. Some lines of research may grind to a halt through lack of interest or success and others may become obsolete through technological advances. The editor has chosen for this volume, eight themes that are of considerable topical interest and the authors have responded with eight readable and informative contributions. Any new worker in any of these fields would find the relevant chapters a good starting point for his research. I say chapters as no area of research can remain isolated from others. It follows

from this that even workers with considerable experience would also find perusal of these chapters rewarding. I particularly liked the review by Cohen and Tschinke on computer-aided drug design. Most areas of human endeavour suffer from a nomenclature that is not logically thought out at the start but merely grows, like Topsy, and thus is often confusing or misleading. Cohen and Tschinke are to be applauded in recognising this and attempting to bring some order to the notion of two types of approach to drug design, both based on receptor theory, but I am not sure that their new designation of receptor-structure based and pharmacore-structure based is any clearer than their previous designation of direct and indirect. If I have a criticism of the this series in its present form it is that the references could be considerably more useful if they included the titles of the papers cited; this is already done for chapters in books.

As noted above, these papers are more than just literature surveys and it is safe to assume that the authors have the relevant details to hand when compiling their bibliographies. In these days of electronic retrieval and word-processors it would not be too difficult to include expand the reference section with this useful information.

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