Book Reviews

Nephrotoxicity; *In Vitro* to *In Vivo*, Animals to Man. Edited by P. H. Bach and E. A. Lock. Plenum Press, New York, 1989, 765 pp., ISBN 0-306-43153-X; $125.00.

This monograph is based on the Third International Symposium on Nephrotoxicity: Extrapolation from Animals to Man and *In Vitro* to *In Vivo*, which was held on August 3–7, 1987, at the University of Surrey, Guildford, Surrey, United Kingdom. The symposium focused on the nephrotoxicity of drugs and chemicals and, in a few cases, examined the relevance of animal nephrotoxicity data to the clinical situation. The book, then, is a compilation of 116 articles (3–24 pp. each) on the nephrotoxicity of heavy metals, light hydrocarbons, halogenated hydrocarbons, aminoglycosides, lithium, platinum, cyclosporin, and radiological contrast media. These papers deal with a wide spectrum of topics including transport and critical cellular events leading to renal cell damage, early biochemical and immunological markers of toxicity, morphological and functional changes, species differences in renal structure and function, extrapolation of animal data to man, *in vitro* methods to evaluate renal toxicity, and nuclear magnetic resonance applications to the examination of chemically induced nephrotoxic lesions.

As would be expected in a book of this nature, the style is rather variable. Some articles include detailed experimental information, while others merely outline the results. The authors' manuscripts were reproduced directly, and the subject index is very brief. Moreover, an author index is, surprisingly, missing and it is disappointing that it should take more than a year for the book to appear in print. Although this book lacks sufficient depth in any one major area of renal toxicology, the wealth of information presented overrides the book's minor deficiencies. This book would be of interest to pharmacologists, toxicologists, biochemists, pathologists, and physicians involved in kidney-related research.

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Pharmaceutical Dosage Forms: Disperse Systems. Volume 2. Edited by H. A. Lieberman, M. M. Rieger, and G. S. Banker. Marcel Dekker, New York, 1989, xx + 690 pp., ISBN 0-8247-8104-X(v. 2).

This text, the second of two volumes on *Disperse Systems*, completes the seven-volume series, *Pharmaceutical Dosage Forms*. Whereas Volume 1 of *Disperse Systems* provides the reader with a review of theoretical principles, Volume 2 emphasizes specific products consisting of two or more phases. Thirty-one authors, representing a cross section from academia and industry, have contributed to the 18 chapters comprising this second volume.

Essentially, the 18 chapters of this text are ordered into three sections. The first four chapters review general principles of equipment selection, preservation, bioavailability, and the use of viscosity-imparting agents in disperse systems. Chapters 5 to 16 review specific products including antacids and clay products, oral aqueous solutions, topical suspensions, reconstitutable suspensions, emulsions and microemulsions, injectable emulsions and suspensions, aerosol suspensions and emulsions, ophthalmic ointments, gels, toothpastes, suppositories (development and production), and liposomes. In each of these chapters the emphasis is toward the applied aspects of formulation, processing, scale-up production, and quality control. All contain useful and current information. Aside from the general principles of bioavailability reviewed in Chapter 3, little discussion is devoted to the effect of formulation on the therapeutic performance of disperse systems. Chapter 17 provides an overview of drug regulatory affairs including an excellent review of the history of the FDA and the evolution of drug regulations. The final chapter reviews the quality assurance of disperse systems, with an emphasis on raw materials specifications and evaluation of finished products.

This is a comprehensive and well-written book containing relevant information about a diverse range of pharmaceutical products. The editors have performed an admirable task in organizing and obtaining uniformity in this large, multiauthored book. In addition, the contents are supplemented throughout with many clear figures, diagrams, tables, and useful model formulae. Most chapters contain adequate lists of pertinent literature citations, although the last two chapters are deficient in this regard. A more comprehensive index would also be helpful for a book consisting of nearly 700 pages.

This book is comprehensive and up-to-date and, as such, would be an excellent reference for industrial and academic pharmacists involved in formulation research and product development of disperse systems, as well as for graduate pharmacy students. Serious workers in this field should consider the purchase of this text for their personal libraries, while it is essential for institutional libraries.

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