REVIEWS

Ethical Safeguards in Research on Humans. Vol. 5. Philosophy and Technology of Drug Assessment. Edited by JOSEPH D. COOPER and HERBERT L. LEY. Interdisciplinary Communication Associates, 1717 Massachusetts Ave., N.W., Washington, DC 20036, 1976. 235 pp. 14.5 × 23 cm. Price $9.00.

This publication consists primarily of the transcripts of an April 1973 conference on "Ethical Problems in Drug Experimentation," which was the fifth in a series on the Philosophy and Technology of Drug Assessment. The 3-year time lag was due to the death of the coordinator, Dr. Joseph D. Cooper, following the seventh conference of the series in March 1975. Human research is a subject with many recent developments, and there are current publications that diminish the significance and timeliness of these proceedings.

The conference dialog was divided into several aspects of human research including surgical experimentation, patients and prisoners as subjects, state moratoriums on research, how to turn off an experiment, national and local review mechanisms, extrapolating results from animal to human, and payments and indemnification. Unfortunately, the majority of the book is merely transcripts of the dialog among the 22 nationally renown medical scientists who are listed as the conference participants. Other than the brief introductory summaries of each chapter, the dialog is sometimes difficult to follow. With the emphasis on dialog, the book suffers from a lack of references that might be useful in documenting the seemingly anecdotal comments of the participants.

The most valuable portion of the book is the introductory "Background Notes on Issues in Experimentation with Human Subjects." This 32-page segment of preconference material summarizes the issues prior to 1973 rather well. The background includes 63 references and a selected bibliography of eight publications. Readers who are following the human experimentation issue very closely may be interested in this publication.

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Drug Metabolism Reviews. Vol. 4. Edited by FREDERICK J. DiCARLO. Dekker, 270 Madison Ave., New York, NY 10016, 1976. 340 pp. 16 × 24 cm. Price $32.50.

According to the press release for reviewers, "Volume 4 includes treatises on the disposition of used and abused drugs, the effects of liver disease upon drug disposition, the biotransformation of insecticides by insects, the clinical usefulness of organic nitrates and the logistics of drug metabolism studies." This is a factual and bald description of a fascinating volume.

The trend toward the complete integration of drug metabolism and pharmacokinetics continues and is very apparent in these reviews. We might as well stop referring to drug metabolism and pharmacokinetics and recognize that we are dealing with an integrated science of drug disposition. The term "drugs" does not just refer to human health products but also to animal health products, pesticides, industrial chemicals, and just about any other nonnutritive material that can enter any type of living organism.

There are three reviews on compounds that have been in use from centuries to millenia: morphine and heroin (Boerner, Abbot, and Roe), nitroglycerin (DiCarlo), and caffeine (Burg). It is always surprising to realize that, despite the length of their use, a great deal about each of them remains unknown. They present active and ongoing research problems of fundamental importance. The review on nitroglycerin is fun to read as well as informative. It got some "Gee whiz, I didn't know that" reactions from me. I'd recommend it as a model for authors.

A great deal of experimental work has been done, and clinical experience exists concerning renal dysfunction and its effects on drug disposition. Much less information exists on the effects of dysfunction of the liver, the other major organ of drug elimination. Wilkinson and Schenker's review on drug disposition and liver disease plays its part in redressing this balance.

The two most important reviews in this volume were written by Ruelius and Weiner on the logistics of drug disposition studies. The discipline of drug disposition is of fundamental importance in industry, where it constitutes an important part of the safety evaluation process, *de facto* or *de jure*. This is not simply to meet regulatory requirements; the regulatory agencies can only lag and react to what is found in the research laboratory and in the field when a drug is in use. Drug disposition studies can occupy a central place in the development process and interact with screening studies, pathology, toxicology, and "clinical" development and use. An academically engendered desire to know all that there is possible to know must give way to the imposition of priorities and the use of finite resources to find out what is of fundamental but practical importance. The primary question must be: "Within what limits is this agent safe and effective?" Each new drug represents a different problem. It would be impractical and impossible to impose rigid checklists or rules of procedure on drug disposition studies. The only valid approach, which both Ruelius and Weiner adapted, is to discuss general principles and then to illustrate the application of those principles by case studies of the problems presented by specific compounds. Many times they are saying the same things but what they are saying needs a lot of repetition.

This book costs almost 10¢ a page but it's well worth it. Buy a copy through your library or your own budget or even personally (it is tax deductible). Once you've got a copy, read it!

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Calculations in Pharmacy. Third Edition. By SUE H. ROUSE and M. GEORGE WEBBER. Lippincott, East Washington Square, Philadelphia, PA 19105, 1976. 264 pp. 15.5 × 23.5 cm. Price $12.75.

The familiar strengths of this useful textbook in pharmaceutical calculations have for the most part remained intact in the second revision of the work. Substantially little has changed in format, content, or presentation of the third edition. Most helpful is its continued logical approach to the reasoned solution for pharmaceutical calculations in a way that deemphasizes rote methods and confusing proportionalities.

To accommodate newer concepts, nearly 800 revised practice problems with answers have been prepared, and "much of the emphasis on the 'art of compounding' has been reduced or neglected in favor of orientation toward patients." The art of the printer, however, is very much evident in the presentation of the book. The new table of contents is expanded in topical outline and detail. It visually organizes the material chapter by chapter, thereby eliminating any need for an index. Answers for sample problems in the text are always given and in many instances underlined for added clarity and emphasis. The use of unit labels is judiciously observed; and wherever factor reduction by cancellation occurs in the sample problems, smaller faced type indicates the results of the operation, thereby making this edition uniformly more readable and understandable for the student.

Chapter 6 contains useful additions contemplated for inclusion in the second edition (1968) but dropped because of a perceived overlap