fine reference source for the more experienced student of public health management.

Considering the individual and society generally, the state of our ecologic environment, and our artificial environment and the interrelationships of each and all of these to disease, the book is eminently successful and well worth study by the pharmaceutical scientist concerned with human ecology and public health.

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New Dimensions in Legal and Ethical Concepts for Human Research Vol. 169, art. 2. Consulting Editor, IRVING LADIMER, New York Academy of Sciences, 2 East 63rd St., New York, NY 10021, 1970. pp. 297–593. 15 × 23 cm. Price $23.00.

The papers in this volume are drawn from a conference of the same name held by the New York Academy of Sciences from May 19 to 21, 1969.

The conference was divided into six sections each of which included the presentation of papers and panel discussions. The sections included were Ethical and Legal Base Lines for Professions and Community; Special Problems of Medical Disciplines; Special Problems of Related Professions; Experience in Design, Conduct, and Evaluation of Research; Professional Controls—Internal and External; and Social Responsibility through Communication.

This conference on "New Dimensions in Legal and Ethical Concepts for Human Research" was convened to enable representatives of major disciplines, mainly medical and legal fields, to present their experience and recommendations for meeting current and anticipated problems of experimentation on and with human beings.

These topics have relevancy to the recent activity in the areas of organ and tissue transplants. Work in these areas suggests that technology can surmount virtually all impediments, but this capacity may have to be curbed by social, ethical, legal, and religious strictures in order to achieve professional and community support.

Of particular interest to the pharmaceutical scientist are the papers on "Control and Surveillance of Investigational Drugs" by Herbert S. Carlin and Ronald T. Turnbull, "Conducting Investigational Drug Studies for Industry" by Kenneth G. Kohlstaedt, and "Drug Evaluation Problems in Academic and Other Contexts" by Louis Lasagna.

Staff Review ■

Parenteral Dosage Forms. By CAROLYN G. HALL and KENNETH E. AVIS. Parenteral Drug Association, Inc., Philadelphia, PA 19107, 1969. vi + 262 pp. 22 × 28 cm. Price $7.50.

This comprehensive annotated bibliography of the literature pertaining to parenteral dosage forms has been prepared by Mrs. Carolyn G. Hall and Dr. Kenneth E. Avis, Department of Pharmaceutics, University of Tennessee, College of Pharmacy.

It covers the period 1959 to 1963 and contains approximately 950 entries. The book is arranged topically with a complete author index. The period just prior to the inception of *International Pharmaceutical Abstracts* was chosen for the first of what is anticipated will be a series of bibliographies because the authors' felt that no coverage of this important period was available.

Staff Review ■

Clinical Pharmacy Handbook. By HUGH F. KABAT. Lea and Febiger, Washington Square, Philadelphia, PA 19106, 1969. v + 108 pp. + 70 workbook style tear-out pp. 21.5 × 27.5 cm. Price $6.50 paperbound.

Portions of this volume were originally presented as course material to the senior students at the University of Minnesota College of Pharmacy. The first three chapters deal with course objectives, a course introduction, and notes on the pharmacist–patient relationship as viewed by the author. Some later chapters involve a collection of common hospital abbreviations and meanings, drug interaction tables, a list of sources of drug information, and a workbook section that affords the pharmacy student the opportunity to investigate the physical, chemical, and pharmacologic properties of any drug by means of charts that must be completed and questions that must be answered and referenced. Approximately one-half of the book is devoted to forms concerning general patient information, the clinical status of the patient, patient progress, and laboratory results. These forms are to be filled in by the pharmacy student as soon as the appropriate information becomes available.

The author indicates in the preface that this text is intended for use by students and for "any pharmacist venturing into the clinical setting." Those others not initiated into a clinically oriented pharmacy practice may find this book to be of some value because some important aspects of clinical pharmacy are presented. For example, the drug interaction tables and the chart on drug-induced modifications of laboratory tests are valuable pieces of literature and the collection of common hospital abbreviations and meanings is a step in dispelling the "language barrier" that, at first, exists between the medical staff and the new pharmacist practitioner.

Those educators thinking of initiating a clinical pharmacy course may also find this book of value because it does offer some basic "patient following" forms that were adapted from forms now in use at other hospitals with a clinical pharmacy service. The book also presents some basic philosophy on the pharmacist–patient relationship and some basic operating rules for the student and clinical instructor while in a patient-care area.

Any pharmacist or pharmacy student who has had any exposure to a clinically oriented pharmacy practice will find this book extremely fundamental and perhaps too course-oriented to be of any great value. The material in the book, for the most part, has already been published in one journal or another. The author has simply compiled such pieces of literature as Dr. Edward Hartshorn's drug interaction tables as they appeared in *Drug Intelligence* and the tables on the drug-induced modifications of laboratory values as they were published in the *American Journal of Hospital Pharmacy*. Any pharmacist entertaining thoughts of a clinical practice should already have well in hand the material that is presented in this book.

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Biologically Active Amines Found in Man. By FRANZ FRANZEN and KURT EYSELL. Pergamon Press, Maxwell House, Fairview Parks, Elmsford, NY 10523, 1969. vii + 244 pp. 23 × 16 cm. Price $13.50.

As stated by the authors, there has not been an extensive survey of the field of "biogenic amines" since 1951, although during this time there has been a considerable expansion of our knowledge of these compounds.

In 128 pages of text, the authors, who are apparently clinicians, discuss numerous aspects of these amines derived from decarboxylation of alpha amino acids. In separate chapters the biochemistry, pharmacology, and pathophysiological significance of biologically active amines are discussed. This *Handbuch* is unique as a comprehensive survey of this subject as related to clinical medicine. The

sections on renal implications and tumor-secreted active amines are especially lucid. The authors cite 1890 references without being overly verbose. The book contains several useful tables of important data such as amine concentrations in blood, urine, and tissues in both normal and pathologic conditions; concentrations of dopamine, norepinephrine, serotonin, and other amines in 41 areas of postmortem brain; and the influence of a variety of amines on the formation and excretion of urine in various animals and man.

This book should prove a useful addition to the library of researchers and clinicians in the fields of autonomic pharmacology and endocrine pathophysiology involving altered secretion or levels of these amines. The discussion is not particularly instructive although it is comprehensive and thorough in reviewing the available literature.

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The National Formulary, Thirteenth Edition. Prepared by the National Formulary Board with the approval of the Board of Trustees, by the authority of the American Pharmaceutical Association. The American Pharmaceutical Association, 1970. Distributed by Mack Publishing Co., Easton, PA 18042. lxxiv + 1012 pp. 14.5 × 23 cm. Price $15.00 (Domestic and Foreign).

The publication of the National Formulary, or any other comparable source for methods or standards, is often viewed as an event in itself, rather than the climax of a long series of procedures. In reality, any book of this nature is the end product of much research, fact finding, study, and evaluation. National Formulary, Thirteenth Edition, represents the results of a five-year revision program carried on by the American Pharmaceutical Association, involving more than 500 persons from the fields of medicine, pharmacy, and chemistry.

Certainly, one of the most important considerations—and the most apparent in the preparation of a new NF edition, is the selection of drugs and dosage forms to be recognized and the preparation of monographs for those chosen. Of the 992 officially recognized articles in NF XIII, 411 are newly admitted. Two hundred twenty-one drugs, recognized in NF XII, have been dropped in going to the new edition.

But a second aspect of the NF, which in certain respects has even more far-reaching consequences, is the application of new techniques and methods and the establishment of new criteria by which to ensure the quality and purity of pharmaceuticals. It is this aspect of the NF revision program which probably reflects to a greater extent the rapid changes and advances in technological capabilities and quality control methodology.

In pursuit of its fundamental purpose—to provide standards and specifications which can be used to evaluate the quality of pharmaceuticals—the NF has fostered the study of factors bearing on drug availability. As a result, NF XIII draws upon and utilizes the many recent developments in drug analysis and methodology in providing new tests, new specifications, and new standards.

Of the 80 General Tests chapters in NF XIII, 16 are new; those carried over from NF XII have been revised and updated to reflect more adequately current needs and capacities.

Among the new General Tests chapters, those on X-ray diffraction and dissolution test are important examples. The first provides a technique enabling the NF Board to specify in these drug substance monographs where polymorphism of the crystal may be a problem affecting bioavailability that the article must conform to a specified X-ray diffraction pattern, while dissolution test specifications provide an objective means of determining dissolution characteristics of a solid dosage form. The inclusion of these chapters and specifications in pertinent individual monographs represents an initial effort by the NF to establish specifications where appropriate both for the active ingredient and the final dosage form, to serve as an index of drug quality from the standpoint of expected biological availability.

The aerosol dosage form is recognized officially for the first time in NF XIII through inclusion of monographs for several therapeutically important aerosol preparations. Among the procedures used to establish standards for aerosol products are leak testing, delivery rate, and pressure testing. NF XIII provides standards and specifications for four aerosol propellants in addition to monographs for six individual aerosol dosage forms.

The rise of consumerism on all levels and the increasing consumer awareness and sophistication concerning drugs—in part due to the drug efficacy study, the hearings on oral contraceptives, the cyclamate controversy, concern over misuse of drugs, and rising medical costs in general—have resulted in increased pressure on the official compendia to keep abreast of trends and developments in the scientific areas. In response to this challenge, the NF revision program is to be put on an even more continuous basis with the first supplement having a scheduled official date of September 1, 1970, coinciding with NF XIII.

In accordance with the objectives of a more continuous revision program, additional NF XIII supplements are planned at regular intervals throughout the revision period.

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