BOOK REVIEWS


Reviewed by: Adviye Ergul, MD, PhD
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The updated second edition of Cardiovascular Therapeutics not only covers specific drug treatments and mechanisms of action of conventional therapeutics, but also includes detailed discussion of drugs in the development stage and potential targets for drug discovery. The 51 chapters and appendix material are organized into 5 sections; Part I, Introductory Chapters; Part II, Drug Classes; Part III, New Drug Classes in Development; Part IV, Special Topics; and Part V, Appendices.

Part I, Introductory Chapters, includes 6 chapters focusing on the basic principles of pharmacology, the placebo effect in cardiovascular disease, compliance with cardiovascular drug treatment, drug development, and economic considerations.

Part II, Drug Classes, is composed of 21 chapters encompassing a wide array of all presently available cardiovascular agents. In addition to detailed discussion of conventional therapeutics such as calcium channel blockers, diuretics and angiotensin converting enzyme inhibitors, this section includes specific chapters on combination drug therapy, tobacco smoking, and cessation therapies, agents that offer cardiovascular protective effects including folic acid and fish oils as well as role of oxidative stress and antioxidant therapy in cardiovascular diseases.

Part III, New Drug Classes in Development, consists of 19 interesting chapters devoted to new therapeutics in the pipeline. For example, Chapter 28, provides detailed information about potassium channels and how potassium channel openers and sodium/hydrogen channel effectors can be used in cardiology. Chapter 31 covers endothelins and development of endothelin receptor antagonists. Results of clinical trials with endothelin receptor antagonists appear to be not up-to-date and selective blockade of receptor subtypes is not discussed. Nevertheless, this chapter gives the readers a good understanding of this system. Another very intriguing chapter (Chapter 39) provides information on the innovative drug targets, including but not limited to adhesion molecules, heat shock proteins, and cytokines. Chapter 41 discusses the great potential of gene therapy in cardiovascular diseases as well as difficulties encountered in this field, giving the readers a good view of the field. Matrix metalloproteases (MMPs) are proteolytic enzymes that are involved in many disease processes and Chapter 43 discusses the potential use of MMP inhibitors in atherosclerosis, heart failure, and restenosis after angioplasty or coronary artery bypass grafting surgery. Although the emerging role of MMPs in ischemic stroke is not mentioned, this entire section on experimental therapeutics offers new ideas and vision for the future of cardiovascular pharmaceuticals.

Part IV, Special Topics, includes 5 chapters and provides detailed information on alternative medicine in the treatment of cardiovascular disorders, drug interactions of commonly used therapeutics, the use of cardiovascular drugs in children, and quality of life issues with cardiovascular drug therapy. These topics are not commonly included in cardiology textbooks and this textbook is a good source of information. Part V, Appendices, contains practical information on the use of cardiovascular therapeutics in clinical practice.

In summary, the entire book is carefully organized and well written. The section on New Drug Classes in Development gives a unique perspective to this textbook and highlights the importance of research in drug development. This textbook is highly recommended for use in professional and graduate level courses in pharmacotherapy and pharmacology.

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The second edition of *A Practical Guide to Pharmaceutical Care* provides a comprehensive and well thought out guide for pharmacy practitioners in all practice settings who aspire to develop and implement a pharmaceutical care practice. The second edition incorporates additional points the authors have learned through teaching numerous pharmacists and pharmacy students over the last 5 years since the first edition of the book was published. Also, where necessary, the second edition reflects modifications to the first edition based on changes that have occurred in pharmacy practice, as well as relevant updates from the literature.

Following the preface to the second edition, as well as the inclusion of the preface to the first edition, the book is divided into 3 sections: (1) “Practice Skills,” (2) “Professional Practice Development,” and (3) “Practice Site Development.” The book wraps up with the presentation of 2 appendices which provide pharmaceutical care statements from 2 national pharmacy organizations. The first section, “Practice Skills,” is comprised of 7 chapters which guide the reader in a detailed, stepwise fashion through various topics that lay the foundation to develop a pharmaceutical care practice. Chapter 1 begins with an introduction to the fundamental concepts of pharmaceutical care. Chapters 2 through 5 guide the reader through various steps in the pharmaceutical care process, such as identifying patient drug therapy problems (chapter 2), gathering and documenting pertinent information from the patient (chapter 3), and evaluating patient data (chapter 4). Chapter 5 focuses on integrating the topics discussed in chapters 2 through 4 into developing and implementing a patient care plan. The first section of the book finishes with a section on the importance of pharmacist documentation of patient care activities (chapter 6) that includes useful examples of documentation tools, and a chapter covering drug information skills that pharmacists need to practice pharmaceutical care (chapter 7).

Section 2 of the book, “Professional Practice Development,” contains 4 new chapters which have been added to the book since the first edition. The first chapter in this section, chapter 8, focuses on a critical and often overlooked step in developing and implementing a pharmaceutical care practice, namely, how pharmacists can develop collaborative working relationships with other healthcare providers. Chapters 9 through 11 concentrate on developing pharmaceutical care services in relatively new areas that pharmacists may not have considered branching out into. These include health screening, monitoring, and disease specific services (chapter 9), patient self-care (chapter 10), and health promotion and wellness (chapter 11).

The last section of the book is “Practice Site Development.” This section of the book describes issues that pharmacy practitioners should have knowledge of to successfully implement a pharmaceutical care practice. Varied topics include marketing pharmaceutical care services (chapter 12), and obtaining reimbursement for pharmaceutical care services (chapter 13). Chapter 14 contains a new section that the authors have added since the first edition which discusses measuring changes and outcomes of implementing pharmacy programs in a pharmaceutical care practice. This chapter gives the reader the basic concepts about measuring outcomes, and is a useful starting point for practitioners and students who are learning about outcomes research. Chapters 15 and 16 discuss pharmacy staffing and layout strategies that could help transition the typical pharmacy into a pharmaceutical care practice and enhance the provision of patient care. A discussion of obstacles that could hinder the provision of pharmaceutical care services is presented in chapter 17, as well as a discussion of both internal and external factors that should be considered when implementing a pharmaceutical care practice (chapter 18). The last chapter, chapter 19, focuses on outlining the steps needed for developing a formal plan for implementing a pharmaceutical care practice.
I would highly recommend this book based on the step-by-step approach used by the authors, coupled with the numerous case studies, examples, and tips included in the book to elaborate and clarify concepts. This is a very relevant and practical resource for pharmacy practitioners, educators, and students who want to learn the fundamentals of developing and implementing a pharmaceutical care practice.

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This book is a compilation of selected formulas from Loyd Allen’s “Contemporary Compounding” column that has appeared uninterrupted in *US Pharmacist* since 1988. An excellent introduction summarizes the current need for extemporaneous compounding and discusses major regulatory publications and institutions. The need for good quality control systems in compounding is stressed. Sixteen sections of formulas follow, grouped by their therapeutic application. Any section may contain formulas for gels, ointments, capsules, injections, suppositories, and other dosage forms related to the therapy of a particular condition. The categories are broad, with major treatments of antiinfective agents, antiinflammatory drugs, dermatological preparations, and hormone replacement. Some of the formulas appear to be of historic interest only, but others are more contemporary and apt to be of value to compounding pharmacists. A very short section on parenterals is pertinent to compounding practice today. Hopefully, the author will provide more formulations of this type in his future columns. There are 4 appendices covering the basics of good compounding practice, equivalent measurement values for calculations, sodium chloride equivalents, and a list of commercial suppliers of compounding materials. A small glossary is included for those unfamiliar with compounding terms, but this could be more complete. While arranging the final index according to dosage form has some academic benefit, an alphabetical index might have made finding formulas for individual compounds easier.

The individual formulas are an education in the theory and technique of compounding. Each formula begins with a conventional listing of ingredients, quantities (weight, percentage, etc), and general mixing order. For complicated formulas, a step-by-step preparation section is provided. Special packaging, beyond use dating, and additional information on fine points of mixing and manipulations are given when such information is considered necessary. Basic knowledge that every pharmacist should know but few do, such as how to determine the amount of filler to be added to a capsule, is very valuable. Of great utility is a discussion section that describes in depth the clinical use(s) of the preparation and the pharmacology of the active drug(s). Detailed information is given on the chemical and physical properties of excipients used in the formulation. The reader is enlightened on the role the excipients play in producing the dosage form. Alternate methods of compounding dosage form or alternate excipients are often given. Each formula is well referenced and the list of references will also prove useful to compounding pharmacists.

The book is an essential reference for compounding pharmacists. It could be an exceptional resource for a compounding course. A motivated student would get a first-rate background in the methodology and ingredients used to compound drug dosage forms, and at the same time enhance his knowledge of clinical pharmacy and pharmacology. While reading formulas may seem dull work to some, I found that the author’s energetic prose and profound expertise made the book a very good read.

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With the ever-increasing use of biotechnology-produced pharmaceuticals, this book offers an excellent overview. While this is a complex and overwhelming topic, the authors have managed to explain the technology and use of these products in a concise, practical, and easy to read format. The 7 chapters cover specific information on monoclonal antibodies, clotting factors, enzymes and regulators of enzymatic activity, cytokines, anticytokines, and oligonucleotide and gene therapy.

The first chapter is an introduction to biotechnology and does a good job of explaining the application of its use in the production of drugs since the 1980s. The authors briefly but succinctly discuss the delivery of recombinant DNA into expression vectors, host cells, the development of recombinant protein, hybridoma technology, and the chimerization process. Easy to understand figures accompany each discussion, further facilitating the understanding of each process.

Each subsequent chapter focuses on the therapeutic use of each class of biotechnology-derived drug. Monographs covering the pharmacology, pharmacokinetics, dosage/administration, important clinical trials, and adverse reactions are provided for each specific product. An introduction to the therapeutic problem or issue for which the product was developed is also included to help the reader focus on the specific uses. The use of tables and figures throughout each chapter help illustrate the text in a way that makes for easy retrieval of pertinent information, such as adverse effects and pharmacokinetics.

This handbook is written for health care professionals who use or recommend the use of biotechnology products for therapeutic use. It would be very useful as an adjunct to a more comprehensive text in an immunology or biotechnical pharmacology course for pharmacy students.

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As stated as the editor’s intention in the preface, *Pharmacogenetics of Psychotropic Drugs* “provides a conceptual framework for understanding and studying the pharmacogenetics of psychotropic drugs; it reviews advances in the field and describes the findings that have already emerged.” Pharmacogenetics is the study of genetically determined interindividual differences in response to drugs. This is a relatively young field (starting in the 1950s) with new mushrooming information emerging. Forty-two international, interdisciplinary authors present 21 chapters divided into 7 parts in this book. The book addresses the broad issues of clinical background and research design; molecular background; pharmacokinetics; specific psychotropic drugs and psychiatric disorders; pharmacogenetics and brain imaging; and biotechnology and pharmaceutical industry perspectives. This is a comprehensive book evaluating the current knowledge in pharmacogenetics, with a focus on the psychotropic agents.

Part 1 is the introduction on “Genes and psychopharmacology: exploring the interface,” authored by the editor, Dr. Bernard Lerer. He eloquently presents the importance of this area of study with a brief historical perspective and some basic concepts and definitions, as well as an explanation of the difficulties and complexities associated with the design and interpretation of pharmacogenetic studies. Potential clinical applications of pharmacogenetics in the clinical and pharmaceuticals arena were described to set up the rest of the book for more information on the shortcomings and potential of these studies.

Part II, titled “Clinical background and research design,” includes 4 chapters which discuss the clinical implications of identifying molecular genetic predictors of drug response, study design and statistical issues, and proposal of the use of empirically derived pharmacologically meaningful classification of mental illness in genetic research. With the recent information from the Human Genome Project completing the draft of the human genome sequence, and with the continuing advancement in technology, some anticipate a bright future for the molecular genetic studies of psychotropic drug response. Interestingly, Dr. Sheldon Preskorn brought up an important economic and social issue that such developments will both promote and restrict psychiatric drug development. When the potential size of the market is reduced secondary to more precise treatments, some development may be hindered when it becomes too small to be commercially viable for the millions of dollars involved in drug development.

Part III, titled “Molecular background,” involves 2 chapters describing the serotonergic gene pathways and role of pharmacogenetics in neurodevelopment of these pathways, as well as RNA processing regulation in interindividual variation. Part IV, titled “Pharmacokinetics,” with 2 chapters discussing the pharmacogenetics of psychotropic drug metabolism and chiral psychotropic drugs.

Part V on “Specific psychotropic drugs and disorders,” includes 9 chapters discussing the most current available pharmacogenetics information on specific psychotropic drugs such as clozapine, benzodiazepines, and anticonvulsants, as well as specific conditions such as tardive dyskinesia, mood and anxiety disorders, bipolar disorders, Alzheimer’s disease, and drug-dependent risk factors.

Part VI, titled “Pharmacogenetics and brain imaging,” includes a relatively short chapter, authored by Dr. Steven Potkins and associates, describing brain-imaging information combined with genetics and their potential contribution to the understanding of the pathophysiological mechanism of disease and treatment responses. Currently known information was described for Alzheimer’s disease and schizophrenia.

Part VII, titled “Industry perspectives,” with 2 chapters discussing pharmacogenetics in psychotropic drug discovery and development, as well as polymorphism genotyping. Continued advancement in molecular genetics and technology will further advance the study of pharmacogenetics, bringing a major revolution in the field of clinical psychopharmacotherapy toward newer and more efficient methods of drug development. It is suggested that joint efforts among academic institutions, government, and industry be established to share the risks and help accelerate research in this promising arena.
Though some information in this book is still in an investigational stage, this is a comprehensive book for clinicians, researchers, and academicians practicing in psychiatry to better understand the current information of genetics interfacing with psychiatric conditions and drugs. However, new emerging information in pharmacogenetics may make this first edition outdated with time. Updated editions every few years with the most current information will be a welcomed reference for all interested in this topic.

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