Bio Pharmaceutics Pharmacokinetics

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Drug Metabolism, Pharmacokinetics and Bioanalysis Springer Science & Business Media
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Applied Biopharmaceutics and Pharmacokinetics American Pharmaceutical Association
Pharmacometrics is the science of interpreting and describing pharmacology in a quantitative fashion. The pharmaceutical industry is integrating pharmacometrics into its drug development program, but there is a lack of and need for experienced pharmacometricians since fewer and fewer academic programs exist to train them. Pharmacometrics: The Science of Quantitative Pharmacology lays out the science of pharmacometrics and its application to drug development, evaluation, and patient pharmacotherapy, providing a comprehensive set of tools for the training and development of pharmacometricians. Edited and written by key leaders in the field, this flagship text on pharmacometrics: Integrates theory and practice to let the reader apply principles and concepts. Provides a comprehensive set of tools for training and developing expertise in the pharmacometric field. Is unique in including computer code information with the examples. This volume is an invaluable resource for all pharmacometricians, statisticians, teachers, graduate and undergraduate students in academia, industry, and regulatory agencies.
Physiologically-Based Pharmacokinetic (PBPK) Modeling and Simulations Academic Press
Presents 52 real-life clinical cases illustrating concepts in pharmacology. This book features Pharmacology Pearls to highlight points. It includes USMLE-style comprehension questions with each case. It also offers a primer on how to approach the basic sciences.
Oral Drug Absorption John Wiley & Sons

The most comprehensive text on the practical applications of biopharmaceuticals and pharmacokinetics! 4 STAR DOODY'S REVIEW! "The updated edition provides the reader with a solid foundation in the basic principles of pharmacokinetics and biopharmaceutics. Students will be able to apply the information to their clinical practice and researchers will find this to be a valuable reference. This modestly priced book should be the gold standard for student use."--Doody's Review Service The primary emphasis of this book is on the application and understanding of concepts. Basic theoretical discussions of the principles of biopharmaceutics and pharmacokinetics are provided, along with illustrative examples and practice problems and solutions to help the student gain skill in practical problem solving.

Case Files McGraw-Hill Medical Publishing

Absorption, Distribution, Metabolism and Excretion (ADME) processes and their relationship with the design of dosage forms and the success of pharmacotherapy form the basis of this upper level undergraduate/graduate textbook. As an introduction oriented to pharmacy students, it is also written for scientist from different fields outside of pharmaceutics. (e.g. material scientist, material engineers, medicinal chemists) who might be working in a positions in pharmaceutical companies or whose work might benefit from basic training in the ADME concepts and some biological background. Pedagogical features such as objectives, keywords, discussion questions, summaries and case studies add valuable teaching tools. This book will provide not only general knowledge on ADME processes but also an updated insight on some hot topics such as drug transporters, multi-drug resistance related to pharmacokinetic phenomena, last generation pharmaceutical carriers (nanopharmaceuticals), in vitro and in vivo bioequivalence studies, biopharmaceuticals, pharmacogenomics, drug-drug and food-drug interactions, and in silico and in vitro prediction of ADME properties. In comparison with other similar textbooks, around half of the volume would be focused on the relationship between expanding scientific fields and ADME processes. Each of these burgeoning fields has a separate chapter in the second part of the volume, and was written with leading experts on the correspondent topic, including scientists and academics from USA and UK (Duquesne University School of Pharmacy, Indiana University School of Medicine, University of Utah College of Pharmacy, University of Maryland, University of Bath). Additionally, each of the initial chapters dealing with the generalities of drug absorption, distribution, metabolism and excretion would include relevant, classic examples related to each topic with appropriate illustrations (e.g. importance of active absorption of levodopa, implications in levodopa administration, drug drug interactions and food drug interactions emerging from the active uptake; intoxication with paracetamol as a result of glutathione depletion, CYP induction and its relationship with acute liver failure caused by paracetamol, etc). ADME Processes and Pharmaceutical Sciences is written as a core textbook for ADME processes, pharmacy, pharmacokinetics, drug delivery, biopharmaceutics, drug disposition, drug design and medicinal chemistry courses.

Biopharmaceutics and Pharmacokinetics John Wiley & Sons

The ADME Encyclopedia covers pharmacokinetic phenomena (Absorption, Distribution, Metabolism and Excretion processes) and their relationship with the design of pharmaceutical carriers and the success of drug therapies. It covers both basic and advanced knowledge, serving as introductory material for students of biomedical careers and also as reference, updated material for graduates and professionals working in any field related to pharmaceutical sciences (medicine, pharmaceutical technology, materials science, medicinal chemistry). Structured as alphabetically ordered entries with cross-references, the Encyclopedia not only provides basic knowledge on ADME processes, but also detailed entries on some advanced subjects such as drug transporters, last generation pharmaceutical carriers, pharmacogenomics, personalized medicine, bioequivalence studies, biowaivers, biopharmaceuticals, gene delivery, pharmacometrics, pharmacokinetic drug interactions or in silico and in vitro assessment of ADME properties

Pharmacokinetics and Pharmacodynamics of Biotech Drugs Springer Science & Business Media

The highly experienced authors here present readers with step-wise, detail-conscious information to develop quality pharmaceuticals. The book is made up of carefully crafted sections introducing key concepts and advances in the areas of dissolution, BA/BE, BCS, IVIC, and product quality. It provides a specific focus on the integration of regulatory considerations and includes case histories highlighting the biopharmaceutics strategies adopted in development of successful drugs.

Drinking Water and Health, Volume 8 CRC Press

Drug Metabolism and Pharmacokinetics Quick Guide covers a number of aspects of drug assessment at drug discovery and development stages, topics such as pharmacokinetics, absorption, metabolism, enzyme kinetics, drug transporters, drug interactions, drug-like properties, assays and in silico calculations. It covers key concepts, with useful tables on physiological parameters (eg. blood flow to organs in x-species, expression and localization of enzymes and transporters), chemical structure, nomenclature, and moieties leading to bioactivation (with examples). Overall it includes a number of key topics useful at the drug discovery stage, which would serve as a quick reference with several examples from the literature to illustrate the concept.

Biopharmaceutics and Pharmacokinetics Considerations John Wiley & Sons

The titled book is “Textbook of BIOPHARMACEUTICS AND PHARMACOKINETICS” (As per PCI regulation). The idea of book originated by authors to convey a combined database for easy understanding of BIOPHARMACEUTICS AND PHARMACOKINETICS. This book is intended to communicate information on novel drug delivery techniques, to direct tutors and learners regarding fundamental concepts in biopharmaceutics. The major aim to write this textbook is to provide information in articulate summarized manner to accomplish necessities of undergraduates as per PCI regulation. This volume is designed not only according to curriculum of undergraduate courses in pharmacy by PCI but also to communicate knowledge on BIOPHARMACEUTICS AND PHARMACOKINETICS for post graduate learners. We assured this book will be originated very valuable by graduates, post graduates, professors and industrial learners.

Biopharmaceutics and Clinical Pharmacokinetics John Wiley & Sons

This book deals with the basics of the two disciplines of biopharmaceutics and pharmacokinetics. Different factors such as biological, physiochemical and formulation that influence the therapeutic efficacy of a drug are covered in biopharmaceutics. The absorption, distribution, metabolism and excretion of drugs are studied under this subject. Salient Features - Basics of biopharmaceutics and pharmacokinetics help to understand the various procedures and advances in drug design, product development, therapeutic drug monitoring, etc. - Pharmacokinetics covers the fundamentals of one compartment open model, multi-compartmental models. One compartment open model is presented in an elaborate manner to make the students familiar with various aspects of pharmacokinetics - Mathematical equations are developed using simple integration and differentiation methods - Practice problems are provided wherever necessary, and a question bank is included at the end of each chapter - Extreme care has been exercised to present the concepts in a simple way Second Edition includes - Application of principles in formulation development in industry for successful bioequivalence studies is included - One chapter on "In-vitro Dissolution Testing" is included to evaluate test formulations to chose right product for bioequivalence studies - A chapter on biostatistics with practice problems is included

Biopharmaceutics Applications in Drug Development John Wiley & Sons

This casebook is designed to help students develop the skills required to identify and resolve drug therapy problems through the use of patient case studies.

Biopharmaceutics CRC Press

This book deals with the basics, of the two disciplines of biopharmaceutics and pharmacokinetics. Different factors such as biological, physiochemical and formulation that influence the therapeutic efficacy of a drug are covered in biopharmaceutics. The absorption, distribution, metabolism and excretion of drugs are studied under this subject. Basics of biopharmaceutics and pharmacokinetics help to understand the various procedures and advances in drug design, product development, therapeutic drug monitoring, etc. The pharmacokinetics part of this book covers the fundamentals of one compartment open model, multi-compartmental models. One compartment open model is presented in an elaborate manner to make the students familiar with various aspects of pharmacokinetics. Mathematical equations are developed using simple integration and differentiation methods to enable the students to understand the concepts easily. Practice problems are provided where ever necessary, and a question bank is included at the end of each chapter to enhance student s knowledge. Extreme care has been exercised to present the concepts in a simple way. Every biological scientist should have knowledge in statistics in order to assess the significance of the results of his experiments. Hence, a chapter on biostatistics with practice problems is included in the book.

Biopharmaceutics and Pharmacokinetics John Wiley & Sons

Pharmacokinetics and Toxicokinetics provides an overview of pharmacokinetics and toxicokinetics in a comprehensible, interrelated, and applied manner. It integrates the principles held in common by both fields through a logical and systematic approach. The book presents mathematical descriptions of physiological processes employed in different appr

Drug Metabolism and Pharmacokinetics Quick Guide Springer Nature

With its clear, straightforward presentation, this text enables you to grasp all the fundamental concepts of pharmacokinetics and pharmacodynamics. This will allow you to understand the time course of drug response and dosing regimen design. Clinical models for concentration and response are described and built from the basic concepts presented in earlier chapters. Your understanding of the material will be enhanced by guided computer exercises conducted on a companion website. Simulations will allow you to visualize drug behavior, experiment with different dosing regimens, and observe the influence of patient characteristics and model parameters. This makes the book ideal for self-study. By including clinical models of agonism, indirect drug effects, tolerance, signal transduction, and disease progression, author Sara Rosenbaum has created a work that stands out among introductory-level textbooks in this area.You'll find several features throughout the text to help you better understand and apply key concepts: Three fictitious drugs are used throughout the text to progressively illustrate the development and application of pharmacokinetic and pharmacodynamic principles Exercises at the end of each chapter reinforce the concepts and provide the opportunity to perform and solve common dosing problems Detailed instructions let you create custom Excel worksheets to perform simple pharmacokinetic analyses Because this is an introductory textbook, the material is presented as simply as possible. As a result, you'll find it easy to gain an accurate, working knowledge of all the core principles, apply them to optimize dosing regimens, and evaluate the clinical pharmacokinetic and pharmacodynamic literature.

Essentials of Biopharmaceutics and Pharmacokinetics - E-Book Shashwat Publication

This first ever coverage of the pharmacokinetic and pharmacodynamic characteristics of biopharmaceuticals meets the need for a comprehensive book in this field. It spans all topics from lead identification right up to final-stage clinical trials. Following an introduction to the role of PK and PD in the development of biotech drugs, the book goes on to cover the basics, including the pharmacokinetics of peptides, monoclonal antibodies, antisense oligonucleotides, as well as viral and non-viral gene delivery vectors. The second section discusses such challenges and opportunities as pulmonary delivery of proteins and peptides, and the delivery of oligonucleotides. The final section considers the integration of PK and PD concepts into the biotech drug development plan, taking as case studies the preclinical and clinical drug development of tasidotin, as well as the examples of cetuximab and pegfilgrastim. The result is vital reading for all pharmaceutical researchers.

Biopharmaceutics And Clinical Pharmacokinetics, 4th Ed. Springer

Updated with new chapters and topics, this book provides a comprehensive description of all essential topics in contemporary pharmacokinetics and pharmacodynamics. It also features interactive computer simulations for students to experiment and observe PK/PD models in action. • Presents the essentials of pharmacokinetics and pharmacodynamics in a clear and progressive manner • Helps students better appreciate important concepts and gain a greater understanding of the mechanism of action of drugs by reinforcing practical applications in both the book and the computer modules • Features interactive computer simulations, available online through a companion website at: https://web.uri.edu/pharmacy/research/rosenbaum/sims/ • Adds new chapters on physiologically based pharmacokinetic models, predicting drug-drug interactions, and pharmacogenetics while also strengthening original chapters to better prepare students for more advanced applications • Reviews of the 1st edition: “This is an ideal textbook for those starting out ... and also for use as a reference book ...." (International Society for the Study of Xenobiotics) and “I could recommend Rosenbaum’s book for pharmacology students because it is written from a perspective of drug action . . . Overall, this is a well-written introduction to PK/PD .... “ (British Toxicology Society Newsletter)

The ADME Encyclopedia McGraw-Hill/Appleton & Lange

A comprehensive introduction to using modeling and simulation programs in drug discovery and development Biopharmaceutical modeling has become integral to the design and development of new drugs. Influencing key aspects of the development process, including drug substance design,

formulation design, and toxicological exposure assessment, biopharmaceutical modeling is now seen as the linchpin to a drug's future success. And while there are a number of commercially available software programs for drug modeling, there has not been a single resource guiding pharmaceutical professionals to the actual tools and practices needed to design and test safe drugs. A guide to the basics of modeling and simulation programs, Biopharmaceutics Modeling and Simulations offers pharmaceutical scientists the keys to understanding how they work and are applied in creating drugs with desired medicinal properties. Beginning with a focus on the oral absorption of drugs, the book discusses: The central dogma of oral drug absorption (the interplay of dissolution, solubility, and permeability of a drug), which forms the basis of the biopharmaceutical classification system (BCS) The concept of drug concentration How to simulate key drug absorption processes The physiological and drug property data used for biopharmaceutical modeling Reliable practices for reporting results With over 200 figures and illustrations and a peerless examination of all the key aspects of drug research—including running and interpreting models, validation, and compound and formulation selection—this reference seamlessly brings together the proven practical approaches essential to developing the safe and effective medicines of tomorrow.

Introduction to Drug Disposition and Pharmacokinetics McGraw-Hill Medical Publishing

Oral Drug Absorption, Second Edition thoroughly examines the special equipment and methods used to test whether drugs are released adequately when administered orally. The contributors discuss methods for accurately establishing and validating in vitro/in vivo correlations for both MR and IR formulations, as well as alternative approaches for MR an

Applied Biopharmaceutics and Pharmacokinetics Elsevier Health Sciences

The application of knowledge of drug disposition, and skills in pharmacokinetics, are crucial to the development of new drugs and to a better understanding of how to achieve maximum benefit from existing ones. The book takes the reader from basic concepts to a point where those who wish to will be able to perform pharmacokinetic calculations and be ready to read more advanced texts and research papers. The book will be of benefit to students of medicine, pharmacy, pharmacology, biomedical sciences and veterinary science, including those who have elected to study the topic in more detail, such as via electives and special study modules. It will be of benefit to those involved in drug discovery and development, pharmaceutical and medicinal chemists, as well as budding toxicologists and forensic scientists who require the appropriate knowledge to interpret their findings and as an introductory text for clinical pharmacologists. Early chapters describe the basic principles of the topic while the later ones illustrate the application of those principles to modern approaches to drug development and clinical use. Full colour illustrations facilitate the learning experience and supporting material for course leaders and students can be found on the Companion Web Site "Another book on PK? Yes and there should be and it should be DD & PK. It is good, unique, and does fill a currently unmet need for those working in the xenobiotic arena. DD & PK is just like the perfect mystery novel—the one “you just can’t put down.” However, unlike a mystery novel which requires only one reading to find the answer, the reader of DD & PK will learn more than an answer to a single question. The reader will find many solutions to a wide variety of mysterious problems associated with the time course and actions of xenobiotics." —International Journal of Toxicology, John A. Budny, PhD, President, PharmaCal, Ltd, 2018 "This book has many innovations that make a welcome addition to the bookshelves of a wide range of pharmaceutical scientists. The effective use of figures and tables to summarize and clarify a wide range of issues is to be commended, as are the learning objectives at the start of the chapter coupled with the summary at the end providing a succinct way in understanding the objectives of the chapter and together with links to a website provides accessibility for all from the neophyte pharmacokineticist to the consultant physician. A book all in the Pharma industry should be aware of." —Int. J. of Pharmacokinetics, Howard M. Hill, ResolvPharma, 2018 "Overall, Introduction to Drug Disposition and Pharmacokinetics offers its readership an in-depth view of classic pharmacokinetic concepts. This book would be an excellent choice for a pharmacokinetics elective or as an adjunctive text for an introductory course. This book reviews a wide array of clinically relevant topics and encourages the reader to apply the knowledge gained to all medi-cations. A robust and varied amount of online material is provided to enhance understanding and encourage discussion. It is likely that all readers, novice or experienced pharmacists, would find value in this textbook." — Currents in Pharmacy Teaching and Learning, Milena McLaughlin, Midwestern University Chicago College of Pharmacy, 2018 "In summary, this is an excellent textbook for students new to the field of pharmaceutics and medical, pharmacy, and veterinary students, particularly those who envision a career in drug development research in either academia or industry." —Veterinary Pathology Review, John K. Amory, University of Washington, 2018

Basic Pharmacokinetics and Pharmacodynamics CBS Publishers & Distributors Pvt Limited, India

Pharmacokinetics, the study of the movement of chemicals within the body, is a vital tool in assessing the risk of exposure to environmental chemicals. This bookâ€"a collection of papers authored by experts in academia, industry, and governmentâ€"reviews the progress of the risk-assessment process and discusses the role of pharmacokinetic principles in evaluating risk. In addition, the authors discuss software packages used to analyze data and to build models simulating biological phenomena. A summary chapter provides a view of trends in pharmacokinetic modeling and notes some prospective fields of study.