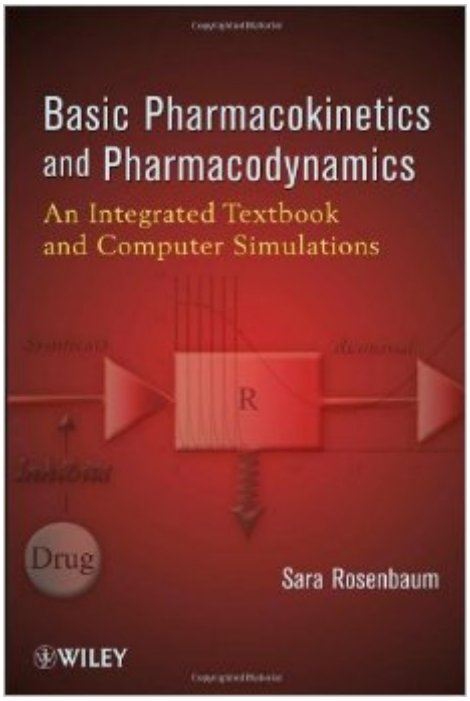
Basic Pharmacokinetics And Pharmacodynamics: An Integrated Textbook And Computer Simulations



Synopsis

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.

Book Information

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Customer Reviews

The book, Basic Pharmacokinetics and Pharmacodynamics: An Integrated Text Book and Computer Simulation, provides a scientific foundation for pharmacy and medical students, pharmacists, and scientists with suitable background who are interested in learning and understanding pharmacokinetics and pharmacodynamics (PK/PD). The presentation of the topics covered in the book is done in a manner that would motivate learners not just to learn the principles of PK/PD, but also to delve into the subject. It introduces the subject and gradually draws the reader into some depth of the subject.Each chapter opens with an outline and objectives. This enables the reader know what he/she will learn from each chapter. This is an excellent feature that undergraduate students will find useful.Unlike other basic textbooks that cover only pharmacokinetics, the author has done justice to the title of the book by covering pharmacodynamics. Pharmacodynamics is covered in greater depth than other books in the same category. What makes the book to stand out is that the author has nicely blended the concepts of receptor theory from classical pharmacology with the modern science of PK/PD. Thus, those with pure pharmacology training who want to expand their knowledge can do because concepts from classically pharmacology have been seamlessly weaved into the modern science of PK/PD. The book truly helps readers to understand the science of pharmacokinetics and drug action. The Excel-based simulation exercises incorporated into the text helps the reader to put his/her learning into practice, albeit in a virtual environment.In summary, the content of the book justifies its title. It introduces and provides the foundation for understanding the science of PK/PD.

I found this book very useful to study PK. A smaller section in the end of the book deals with PD. I found very useful the exercises and the online tools to run the simulations. This is indeed a very useful book! I recommend it to any ADME scientist. I studied the book very carefully. I learnt a lot about PK/PD simulations. Since I studied the book carefully I found some typos and I also found some parts that in my opinion could be rewritten/explained clearly. I passed the comments to the author of the book. Sara told me that she is now working for a proposal of the second edition. I am looking forward to it.Here are my feedback and typos that should be fixed.Dr Luca SettimoComputational chemist and clinical pharmacistHere are my comments:P is the abbreviation for pageP 12: ...which a major organ of drug elimination. (â œISâ • is missing: I suggest writing: which is a major organ of drug elimination)â •P 21: The membranes of these cells consist of a bimolecular layer of lipoproteins. (I think the author meant to write: The membranes of these cells consist of a bimolecular layer of phospholipids? The bilayer is not made of lipoproteins...)Page 25:

perhaps the author could indicate how logD is calculatedP 77If the drug were displaced and fu increased to 0.2, Vd would be predicted to increase to 117 L ... that is true but it would be nice to help the reader to understand how the author find the volume of 117 L using eq 4.16 (the author need to find Vt/fut = 570 since the author know from the first case that Vd=60, Vp =3 and fu = 0.1, then the author can find the new Vd = 117 once the author know that Vt/fut = 570 and Vp again = 3 and fu = 0.