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Titolo	ADME Processes in Pharmaceutical Sciences : Dosage, Design, and Pharmacotherapy Success / / edited by Alan Talevi, Pablo A. M. Quiroga
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2018
ISBN	3-319-99593-6
Edizione	[1st ed. 2018.]
Descrizione fisica	1 online resource (X, 362 p. 88 illus., 67 illus. in color.)
Disciplina	615.7
Soggetti	Pharmaceutical chemistry Pharmaceutics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	Part 1 The Basics of ADME Processes -- Introduction ADME Processes and Their Relationship with Pharmaceutical Practice -- Drug Release -- Drug Adsorption -- Drug Excretion.-Routes of Administration -- Part 2 The Importance of ADME Properties in Burgeoning Pharmaceutical Topics -- Nanotechnology and Drug Delivery -- Pharmacogenomics and Indiviualized Therapy -- Bioavailability and Bioequivalence Studies -- The Absorption and Distribution of Biopharmaceuticals/Biological Medical Products -- Drug-Drug and Food-Drug Interactions of Pharmacokinetic Nature -- In silico and In vitro ADME prediction -- Drug Transporters and Multi-drug Resistance.
Sommario/riassunto	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.