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Nota di contenuto	PRECLINICAL DEVELOPMENT HANDBOOK ADME and Biopharmaceutical Properties; CONTRIBUTORS; CONTENTS; Preface; 1 Modeling and Informatics in Drug Design; 2 Computer Techniques: Identifying Similarities Between Small Molecules; 3 Protein-Protein Interactions; 4 Method Development for Preclinical Bioanalytical Support; 5 Analytical Chemistry Methods: Developments and Validation; 6 Chemical and Physical Characterizations of Potential New Chemical Entity; 7 Permeability Assessment; 8 How and Where Are Drugs Absorbed?; 9 Absorption of Drugs after Oral Administration 10 Distribution: Movement of Drugs through the Body 11 The Blood-Brain Barrier and Its Effect on Absorption and Distribution; 12 Transporter Interactions in the ADME Pathway of Drugs; 13 Accumulation of Drugs in Tissues; 14 Salt and Cocrystal Form Selection; 15 Dissolution; 16 Stability: Physical and Chemical; 17 Dosage Formulation; 18 Cytochrome P450 Enzymes; 19 Metabolism Kinetics; 20 Drug Clearance; 21 In Vitro Metabolism in Preclinical Drug Development; 22 Utilization of In Vitro Cytochrome P450 Inhibition

Data for Projecting Clinical Drug-Drug Interactions

23 In Vivo Metabolism in Preclinical Drug Development 24 In Vitro

Evaluation of Metabolic Drug-Drug Interactions: Scientific Concepts and Practical Considerations; 25 Mechanisms and Consequences of Drug-Drug Interactions; 26 Species Comparison of Metabolism in Microsomes and Hepatocytes; 27 Metabolite Profiling and Structural Identification; 28 Linkage between Toxicology of Drugs and Metabolism; 29 Allometric Scaling; 30 Interrelationship between Pharmacokinetics and Metabolism; 31 Experimental Design Considerations in Pharmacokinetic Studies; 32 Bioavailability and Bioequivalence Studies

33 Mass Balance Studies 34 Pharmacodynamics; 35 Physiologically Based Pharmacokinetic Modeling; 36 Mathematical Modeling as a New Approach for Improving the Efficacy/Toxicity Profile of Drugs: The Thrombocytopenia Case Study; 37 Regulatory Requirements for INDs/FIH (First in Human) Studies; 38 Data Analysis; Index

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### Sommario/riassunto

A clear, straightforward resource to guide you through preclinical drug development. Following this book's step-by-step guidance, you can successfully initiate and complete critical phases of preclinical drug development. The book serves as a basic, comprehensive reference to prioritizing and optimizing leads, dose formulation, ADME, pharmacokinetics, modeling, and regulations. This authoritative, easy-to-use resource covers all the issues that need to be considered and provides detailed instructions for current methods and techniques. Each chapter is written by one or more leading

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