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comments; References; 5 Premarketing efficacy evaluation; 5.1 Introduction; 5.2 Target identification; 5.3 Lead optimisation; 5.4 Target validation in animal models; 5.5 The use of genetically modified animals in CNS drug development; 5.6 A selection of animal models of psychiatric disease; 5.7 A selection of animal models of neurodegenerative disease; 5.8 Which models to choose; 5.9 Clinical trials that evaluate drug efficacy; 5.10 Specific drug profiles; References 6 Pharmacokinetic considerations: Absorption, distribution, metabolism and elimination6.1 Introduction; 6.2 What are the 'ideal' pharmacokinetic properties for a CNS drug?; 6.3 Absorption; 6.4 Distribution; 6.5 Metabolism; 6.6 Elimination; 6.7 Measurement of drug concentrations; 6.8 Factors that affect pharmacokinetics; 6.9 Allometric scaling; 6.10 Microdosing (Phase 0) Studies; 6.11 Dose prediction and therapeutic drug monitoring; 6.12 Stereoselectivity of metabolism of drugs; 6.13 Specific drug profiles; 6.14 Concluding comments; References; 7 Safety concerns; 7.1 Introduction 7.2 Postmarketing surveillance7.3 Acute poisoning; 7.4 Quantification of the relative risk of fatalities from CNS drugs; 7.5 Adverse drug reactions (ADRs); 7.6 Specific types of toxicity encountered with psychotropic drugs; 7.7 Safety concerns following long-term administration of CNS Drugs; 7.8 Polypharmacy; 7.9 Specific drug profiles; 7.10 Concluding comments; References; Websites; 8 Preclinical and clinical safety evaluation; 8.1 Introduction; 8.2 Preclinical exploratory toxicology and safety pharmacology evaluations; 8.3 Primary and secondary pharmacology; 8.4 Safety pharmacology 8.5 Toxicology studies required for regulatory purposes

Sommario/riassunto

This title acts as a primer, giving students and newcomers to the field an opportunity to learn about the breadth of the CNS drug discovery. The book outlines the core processes in drug discovery and development for CNS disorders, from evaluating drugs for desirable efficacy, safety and pharmacokinetic features in preclinical (using in vitro and in vivo models) and clinical experimentation to identifying future drug targets. Containing up-to-date experimental evidence and detailing the main impediments in the pipeline of CNS drug discovery and development, this is a key reference