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 experts in the field. These authors, representing the many disciplines involved in preclinical toxicology screening and testing, give you the tools needed to apply an effective multidisciplinary approach. The editor has carefully reviewed all the chapters to ensure that each one is thorough, accurate, and clear.

Among the key topics covered are:

* Modeling and informatics in drug design

* Bioanalytical chemistry
Absorption of drugs after oral administration

Transporter interactions in the ADME pathway of drugs

Metabolism kinetics

Mechanisms and consequences of drug-drug interactions

Each chapter offers a full exploration of problems that may be encountered and their solutions. The authors also set forth the limitations of various methods and techniques used in determining the safety and efficacy of a drug during the preclinical stage.

This publication should be readily accessible to all pharmaceutical scientists involved in preclinical testing, enabling them to perform and document preclinical safety tests to meet all FDA requirements before clinical trials may begin.

### ABOUT THE AUTHOR

**SHAYNE COX GAD, PHD, DABT, ATS**, is the Principal of Gad Consulting Services. Dr. Gad has more than thirty years of experience as a toxicologist, statistical consultant, manager, and general consultant on research and development in the chemical, consumer product, contract testing, biotechnology, medical device, and pharmaceutical industries. He is the author of thirty-four books and numerous papers, presentations, and other publications.

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