Drug Metabolism and Pharmacokinetics Quick Guide

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This book is dedicated to:

Zarrin, Sohrob and my parents, Maryam and Mahmoud
Sally, Ethan and Matthew
Giti, Patrick and Chloe

For their love and support

Preface

Drug discovery is complicated and yet rewarding in many ways. We have come to appreciate that drug discovery is possible when we are constantly making important and timely decisions for synthesis of superior compounds that have the potential for being a safe and an effective drug. Drug metabolism and pharmacokinetics play an integral role in this process.

Drug Metabolism and Pharmacokinetics Quick Guide is intended for broad readership for those working or interested in drug discovery from various disciplines such as medicinal chemistry, pharmacology, drug metabolism and pharmacokinetics, bioanalysis, clinical sciences, biochemistry, pharmaceutics and toxicology. It provides, for the first time, a completely integrated look at multiple aspects of ADME sciences (absorption, distribution, metabolism, and excretion) in a summary format that is clear, concise, and self-explanatory. We have minimized the amount of prior knowledge required for the reader by providing the basics of each concept. This reference book is meant to be used day to day and provides many useful tables (used for data interpretation), figures and factoids. The factoids are intended to be short and relevant to the topic discussed that would allow another dimension to the discussions.

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Dr. Harvey Wong graduated from the University of British Columbia with a Ph.D. in Pharmacokinetics and Biopharmaceutics. Following graduation, he worked at the DuPont Pharmaceutics Company followed by Bristol-Myers Squibb in the area of Neuroscience Drug Discovery. Currently, Harvey is a Senior Scientist in the Department of Drug Metabolism and Pharmacokinetics at Genentech, Inc. working in the areas of oncology and immunology. He is involved in pharmacokinetic modeling and defining preclinical PK-PD relationships for drug candidates in both therapeutic areas. Harvey has published over 70 publications and abstracts.

Dr. Cornelis E.C.A. Hop is supervising the Small Molecule Drug Metabolism & Pharmacokinetics Department at Genentech (South San Francisco) and leads a team of about 55 scientists involved in acquisition and interpretation of ADME data in support of drug discovery and development. Before that he was a senior director at Pfizer (Groton, CT) and a Senior Research Fellow at Merck (Rahway, NJ). Dr. Hop has extensive experience in ADME sciences and biotransformation, PK prediction and bioanalysis in particular. He has authored more than 100 publications in refereed journals and several book chapters and made more than 50 external oral presentations at conferences and universities.