Drug Development and Industrial Pharmacy, 33:803, 2007

ISSN: 0363-9045 print / 1520-5762 online
DOI: 10.1080/03639040600975055

informa
healthcare

Book Review

Analogue-based Drug Discovery, J. Fischer and R. Ganellin, editors, Wiley & Sons, Hoboken, NJ, 2006. Hardback, 606 pages, ISBN: 3-527-31257-9

Drug discovery is a time-consuming and costly process. The utilization of wise strategies to quickly identify drug entities is of considerable significance in the highly competitive and formidable challenging pharmaceutical business. Statistic study reveals that about 50% of all "new" drugs are the analogues of "old" drugs. Moreover, increasing investigations have shown that many "old" drugs display new therapeutic implications. Therefore, existing drugs are a rich resource for the development of new drugs. The book, entitled "Analogue-based Drug Discovery" edited by János Fischer and Robin Ganellin, collects the wealth of information of the strategy and case studies from an international cast of experienced experts in the field of medicinal chemistry.

The book is well organized and written in a clear flow of principles, examples, and summary. The book consists of 19 chapters in three sections and each chapter includes references for readers to get further information. The first part of the book describes the general aspects of analogue-based drug discovery including analogues as a means in the discovery of new drugs, the relationship of drug likeness and analogue-based drug discovery, and privileged structures as an important strategy in drug discovery. The main body of the book is the use of the real cases to illustrate how the strategy of analogue-based drug discovery to be carried out in drug development. The examples cover a broad range of important classes of therapeutic categories including beta-blockers, ACE inhibitors, steroids, opiates, coxibs, stigmines, proton pump inhibitors, platinum-based anti-cancer compounds, and quinolones. Generally, each case includes the background, mechanism of drug interaction, structure-activity relationship, synthesis, pharmacology, clinical profiles and concluding remarks. Moreover, selected case studies based on successful clinically used drug analogues are provided to give readers insights on how to develop new drugs using this analogue-based strategy. In the final section, the book summarizes in a succinct manner the most successful drug analogues with useful information of their structures, therapeutic targets, and patent status.

The book is an important part in the series of the Medicinal Chemistry and Drug Development, organized and sponsored by the Division of Chemistry and Human Health, the IUPAC. It is an excellent "text" book for medicinal chemists and essential reading material for students studying medicinal chemistry. This book should be of great interest to other scientists involved in drug discovery such as computational chemists and organic chemists in drug development, biochemists and pharmacologists in both academic and pharmaceutical and allied industries. It should find a place on all library shelves and will no doubt be a routine reference text in this field.

Wei Wang, PhD, Assistant Professor
Department of Chemistry
University of New Mexico
Albuquerque, NM
E-mail: wwang@unm.edu