



Pharmacogenomics: The Search for Individualized Therapies

Edited by Julio Licinio

and Ma-Li Wong, Wiley, 2002, Price €74.30,
600 pages in hardback, ISBN 3-527-30380-4

Coincident with the publication of the nucleotide sequence of the human genome and advances in sequencing and genotyping technologies, the emerging field of pharmacogenomics has received significant attention. This attention has come from scientists engaged in the discovery and development of therapeutics, physicians dedicated to treating individual patients and, increasingly, from a treatment conscious public. As such, a book about this rapidly evolving field, which sets out the current thinking on its use and applications in the creation of new medicines, is timely and welcome.

Pharmacogenomics: The Search for Individualized Therapies is composed of chapters written by some of the world's leading academic and corporate experts. It provides a timely overview of the field, applications both achieved and hoped for, and challenges for application in the real world of clinical practice. It is written primarily to scientists and students so it is no surprise that it is compiled much like a course textbook, beginning with introductory chapters covering the history, current state and future potential of pharmacogenomics. The format is helpful, each chapter beginning with an abstract and ending with a summary of conclusions and a comprehensive reference list. Because the last two thirds of the book are dedicated to exploring the pharmacogenomics of specific classes of therapeutics, diseases or conditions, the references provide a valuable

compilation for the scientist interested in a particular therapeutic area.

As noted, the first third of the book focuses broadly on the state and future of pharmacogenomics. Many of these chapters attempt to define pharmacogenomics and to distinguish it from the older term, pharmacogenetics. The reader looking for consensus here will be disappointed and will find many conflicting and overlapping perspectives. As the editors state in their preface, these contradictory and repetitive paragraphs are intentionally left unedited to present the author's individual opinions. Although difficult for the reader, it accurately represents the current state of the developing field. Interesting, in his chapter *The Role of Pharmacogenetics in Drug Discovery and Therapeutics*, Klaus Lindpaintner makes a compelling presentation of what he believes is an emerging consensus on the differences between the two terms and their use.

The broad opening chapter on the promise and limitations of pharmacogenomics is one that most readers who are familiar with the field will find a recapitulation of the numerous articles already written on the subject. Each of the subsequent chapters comprising the introductory third of the book focus on the history and outcomes of sequencing the human genome, its relevance to discovering and establishing the clinical validity of pharmacogenomic markers, their roles in understanding the action of drugs, and how they might be applied in the pharmaceutical processes of drug design and development. These first seven chapters provide the reader with a good review of the various strategies employed to discover pharmacogenomic markers, validate their use through appropriately designed and powered association studies, and the current thinking on their application in drug research and development.

The remainder of the book explores the state of knowledge of pharmacogenomics

in specific classes of drug targets, transporters, therapeutic agents and disease states. These chapters are well researched and written by leading experts in the field. They provide useful reviews of how genetics is being employed in specific therapeutic areas and, taken together, indicate those areas that are most likely to benefit soon from a genetic approach. Although much, if not all, of the same information can be found in journals specific to the respective field, it is useful to have them referenced in specific chapters and to have the commentary and perspective of the various expert authors.

In attempting to review the state-of-the-art of an emerging and rapidly changing field, the editors can only provide 'a snapshot in time' of pharmacogenomics: it could soon be out-dated. However, the book does an excellent job of compiling a current picture of an important and compelling field of medical research.

Ronald Norton

VP, Operations

DNA Sciences

3500 Paramount Parkway

Morrisville, NC 27560, USA

e-mail: rnorton@dna.com

BioMedNet Reviews

5000+ review articles

including

Trends, Current Opinion

and *DDT*

Bookmark:

<http://reviews.bmn.com/>