Concepts in Pharmacogenomics, 2nd Edition

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The Pharmaceutical Journal 3 AUG 2017 By Laurence A. Goldberg

The first edition of this book, published in 2010, set out to give the readers an understanding of the potential impact that pharmacogenomics would have on the practice of pharmacy. This new edition contains updates on current and next-generation genomic technologies that will be used to identify new drug targets and improve overall drug safety. The emphasis is on the role that pharmacogenomics plays in the individualisation of cancer chemotherapy and the future development of new cancer drug targets. Two new chapters cover the pharmacogenomics of drug addiction and drugs used to treat diabetes.

The book is divided into three parts. The first looks at the basic science involved in pharmacogenomics, with a focus on methodologies, as well as the general effects of genetic variability on the pharmacokinetics and pharmacodynamics of drug therapy. The second part presents a system-based review of current pharmacogenomic applications in clinical practice, while the third focuses on relevant topics designed to give the readers a background on the impact that pharmacogenomics will have on the patient, the pharmacist and healthcare in general.

'Concepts in pharmacogenomics' incorporates a number of features designed to enhance its usefulness. At the beginning of each chapter, learning objectives are set out. Key definitions follow to ensure that readers are clear on the meaning of certain important words before they delve into the chapter. This is important because many of these words may be new to the readers. Chapters also contain case studies to illustrate key issues and 'clinical pearls' to emphasise important concepts and clinical applications.

The chapters have been written by individuals who use, teach or have a thorough understanding of pharmacogenomics and the impact it has on their area of expertise. They are written in a simple, clear and organised style, at a level that will be of use to pharmacists practising in any area of the profession, with varying levels of knowledge about pharmacogenomics.

Many summary tables and figures supplement the text. At first sight, some of these seem to be extremely complex but by repeated referral to the text, they become much clearer. Each chapter is well referenced with, for example, the chapter on the pharmacogenetics of drug metabolism citing 330 papers.

Pharmacists who read this book will appreciate that their qualifications and training make them ideally suited for playing a leading role in bringing this discipline into mainstream clinical practice.