Pharmacoepigenetics Its Role In Interindividual

Glaucoma is a specialty in ophthalmology that includes a group of diseases that affect the optic disc and visual fields and is usually accompanied by increased intraocular pressure. This book addresses new topics in glaucoma that have not been included and expands topics that have been included in the previous glaucoma books published by InTech. The book is a product of balance between expedited publication and the will to encompass the whole field and therefore contains the latest developments and new perspectives in glaucoma. It is intended for glaucoma specialists, general ophthalmologists, trainees and researches to increase the knowledge and understanding these complex diseases and to encourage further investigation for the benefit of the entire human community.

In recent years our understanding of molecular mechanisms of drug action and interindividual variability in drug response has grown enormously. Meanwhile, the practice of anesthesiology has expanded to the preoperative environment and numerous locations outside the OR. Anesthetic Pharmacology: Basic Principles and Clinical Practice, 2nd edition, is an outstanding therapeutic resource in anesthesia and critical care: Section 1 introduces the principles of drug action, Section 2 presents the molecular, cellular and integrated physiology of the target organ/functional system and Section 3 reviews the pharmacology and toxicology of anesthetic drugs. The new Section 4, Therapeutics of Clinical Practice, provides integrated and comparative pharmacology and the practical application of drugs in daily clinical practice. Edited by three highly acclaimed academic anesthetic pharmacologists, with contributions from an international team of experts, and illustrated in full colour, this is a sophisticated, user-friendly resource for all practitioners providing care in the perioperative period.

The Future of Clinical Research and Health Care: From Empirical to Precision Medicine Clinical and Statistical Considerations in Personalized Medicine explores recent advances related to biomarkers and their translation into clinical development. Leading clinicians, biostatisticians, regulators, commercial professionals, and researchers address the opportunities and challenges in successfully applying biomarkers in drug discovery and preclinical and clinical development. Robust Biomarkers for Drug Development and Disease Treatment The first four chapters discuss biomarker development from a clinical perspective. Coverage ranges from an introduction to biomarkers to advances in RNAi screens, epigenetics, and rare diseases as targets for personalized medicine approaches. Subsequent chapters examine the statistical considerations in applying a personalized medicine approach, including multiplicity in pharmacogenomics. The last chapter assesses the regulatory issues involved in using biomarkers. Improve Patient Care and Reduce Costs and Side Effects Despite the vast amount of literature on biomarkers, there is no comprehensive book that integrates the clinical and statistical components. This book is one of the first to incorporate both the clinical and statistical aspects of biomarkers in the personalized medicine paradigm. Covering a wide spectrum of personalized medicine-related topics, it presents state-of-the-art techniques for advancing the application of biomarkers in drug discovery and development.

Pharmacogenomics is comprehensive textbook detailing how genetic makeup affects a body's response to drugs.

"Estabelecida por volta da metade do século XIX para investigar casos de envenenamento, a toxicologia forense estendeu gradualmente seu escopo a muitas outras áreas: direção sob a influência de drogas e álcool, crimes facilitados por drogas, testes de drogas no ambiente de trabalho, controle de dopagem, identificação e quantificação de drogas de abuso em materiais apreendidos, avaliação do uso de agentes de guerra química etc. Todas essas áreas foram tratadas em capítulos separados deste livro, a partir de uma perspectiva que leva em consideração a natureza multidisciplinar da toxicologia forense, incluindo competências de vários campos diferentes do conhecimento humano, como medicina, química e direito. Entender o trabalho complexo, meticuloso e interdisciplinar por trás de qualquer investigação toxicológica forense é um requisito essencial para fazer bom uso de seus resultados e suas interpretações com vistas a uma aplicação correta e justa da lei. Assim, tenho muita esperança de que este livro seja usado não só por estudantes, a quem é primariamente dirigido, mas também por agentes de justiça, juízes e todos aqueles que procuram um laboratório de toxicologia forense para pedir uma investigação." - Prof. Aldo Polettini, Ph.D. Universidade de Verona

Pharmacogenomics: Challenges and Opportunities in Therapeutic Implementation includes discussions and viewpoints from the academic, regulatory, pharmaceutical, clinical, socio-ethical and economic perspectives. Each chapter presents an overview of the potential or opportunity within the areas discussed and also outlines foreseeable challenges and limitations in moving pharmacogenomics into drug development and direct therapeutic applications. This edited book contains review questions for a more in-depth analysis of the implications of pharmacogenomics and discussion points to generate ideas on best to move the field forward. Clinical pearls and case studies are used to illustrate real-life experiences and both successful and unsuccessful applications. Tables, figures, and annotations are included throughout the book to facilitate understanding and further reference. Multi-contributed book and chapters are written by contributors who are experts in their field Provides perspectives from those involved in all aspects of pharmacogenomics-including academic, regulatory, economic, industry and medical-to illustrate how all of the pieces fit together and where the challenges may be Includes case studies of both successful and unsuccessful applications so readers can consider the potential and challenges in moving the science into drug development and direct therapeutic applications Chapters contain discussion questions and clinical pearls and enable readers to reflect on how to move pharmacogenomics forward and apply these observations and useful tips to their own work and research

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This book is a comprehensive resource on psychotropic medications, detailing the latest methods for defining their characteristics, their use in different patient populations, and drug-drug interactions; an important collection of information forclinicians, students, researchers, and members of the pharmaceutical industry alike. The first section provides the foundational principles of these drugs. Mathematical modeling of parameters that affect their entryto,and exit from, the central nervous system (CNS) compartment are presented on an individual basis and then applied to target populations with specific disease states. Methods and characteristics that inform the transfer of these drugs from the laboratory bench to use in patient care are discussed, including imaging techniques, genetics and physiological barriers, such as the blood-brain barrier. The second section describes the

characteristics of specific agents,nominally arranged intodifferent therapeutic categories and with reference crossover use in different disease states. The pharmacologic characteristics of different drug formulations are explored in the context of their ability to improve patient adherence. The third section focuses on drug-drug interactions.Psychotropic medications from different categories are frequently prescribed together,or alongside medications used to treat comorbid conditions, and the information provided is directly relevant to the clinic, as a result. The clinical application of pharmacokinetics and pharmacodynamics of CNS agents has made significant progress over the past 50 years and new information is reported by numerous publications in psychiatry, neurology, and pharmacology.Our understanding of the interrelationship between these medications, receptors, drug transporters, as well as techniques for measurement and monitoring their interactions,isfrequently updated. However, with information presented on a host of different platforms, and in different formats, obtaining the full picture can be difficult. This title aims to collate this information into a single source that can be easily interpreted and applied towards patient care by the clinical practitioner, and act as a reference for all others who have an interest in psychopharmacological agents.
Handbook of Pharmacogenomics and Stratified Medicine is a comprehensive resource to understand this rapidly advancing field aiming to deliver the right drug at the right dose to the right patient at the right time. It is designed to provide a detailed, but accessible review of the entire field from basic principles to applications in various diseases. The chapters are written by international experts to allow readers from a wide variety of backgrounds, clinical and non-clinical (basic geneticists, pharmacologists, clinicians, trialists, industry personnel, ethicists) to understand the principles underpinning the progress in this area, the successes, failures and the challenges ahead. To be accessible to the widest range of readers, the clinical application section introduces the disease process, existing therapies, followed by pharmacogenomics and stratified medicine details. Medicine is the cornerstone of modern therapeutics prescribed on the basis that its benefit should outweigh its risk. It is well known that people respond differently to medications and in many cases the risk-benefit ratio for a particular drug may be a gray area. The last decade has seen a revolution in genomics both in terms of technological innovation and discovering genetic markers associated with disease. In parallel there has been steady progress in trying to make medicines safer and tailored to the individual. This has occurred across the whole spectrum of medicine, some more than others. In addition there is burgeoning interest from the pharmaceutical industry to leverage pharmacogenomics for more effective and efficient clinical drug development. Provides clinical and non-clinical researchers with practical information normally beyond their usual areas of research or expertise Includes an basic principles section explaining concepts of basic genetics, genetic epidemiology, bioinformatics, pharmacokinetics and pharmacodynamics Covers newer technologies– next generation sequencing, proteomics, metabolomics Provides information on animal models, lymphoblastoid cell lines, stem cells Provides detailed chapters on a wide range of disease conditions, implementation and regulatory issues Includes chapters on the global implications of pharmacogenomics
Livestock production systems are the result of an interaction between domestic animals and the environment, modulated by man, that dates back to Neolithic times. As a consequence of this interaction among the wide diversity of animal resources, natural habitats and population needs, very different farming systems have developed across the Mediterranean Basin. Understanding the mechanisms and effects of these relationships is key to design the farming systems best adapted to each condition, guaranteeing an adequate balance between target animal production and environmental outcomes provided by these systems. This is indeed a multidimensional topic, influenced by animal genetics, feeding resources, flock management, and economic and social aspects inside and outside the household. Therefore, this book focuses on the basis of the animal-environment interactions and the impact of human activities on the type and magnitude of these interactions. In this context, the issue of sustainability of livestock production is evaluated considering economic, social and environmental aspects. This book contributes to upgrade the state of the art in Mediterranean conditions, providing indicators and procedures of application across a wide range of systems, and hence of interest for researchers, students and professionals concerned with livestock production and the environment.
The rapidly evolving field of Pharmacogenetics aims at identifying the genetic factors implicated in the inter-individual variation of drug response. These factors could enable patient sub-classification based on their treatment needs thus expediting drug development and promoting personalized, safer and more effective treatments. This book presents Pharmacogenetic examples from a broad spectrum of different drugs, for different diseases, which are representative of different stages of evaluation or application. It has been designed so as to serve both the unfamiliar reader through explanations of basic Pharmacogenetic concepts, the clinician with presentation of the latest developments and international guidelines, and the research scientist with examples of Pharmacogenetic applications, discussions on the limitations and an outlook on the new scientific trends in this field.
Establishment of a normal phenotype involves dynamic epigenetic regulation of gene expression that when affected contributes to human diseases. On a molecular level, epigenetic regulation is marked by specific covalent modifications (acetylation, methylation, phosphorylation, sumoylation, PARylation and ubiquitylation) of DNA and its associated histones. Studies also suggest the influence of such epigenetic modifications on non-coding RNA expression implicated in normal and diseased phenotypes. Epigenetic control of genetic expression is a reversible process essential for normal development and function of an organism. Alteration of epigenetic regulation leads to various disease forms such as cancer, diabetes, inflammation and neuropsychiatric disorders. Assessing these alterations provides a deeper insight into the changes induced in the genome, which is often informative for identifying disease subtypes or developing suitable treatments. Therefore, epigenetics proves to be a key area of clinical investigation in diagnosis, prognosis, and treatment of complex diseases. Genetic mutations, environmental stress, pathogens and drugs of abuse are some of the predominant factors that

induce and impact changes on chromatin, which directly dictate a diseased phenotype. It is essential to consider the interaction between genetic and epigenetic factors to understand the molecular mechanisms of complex human diseases for safer and efficient drug development. Furthermore, genetic variation in absorption, distribution, metabolism, and excretion (ADME) genes is insufficient to account for interindividual variability of drug response. Therefore, current efforts aim to identify epigenetic components of ADME gene regulation, which include phase-I and phase-II enzymes, uptake transporters, efflux transporters and nuclear receptors involved in regulation of ADME genes. Monitoring circulatory epigenetic biomarkers in liquid biopsies (blood, saliva, urine, cerebrospinal fluid) of disease-associated and drug-associated epigenetic alterations may prove useful for decision support for routine clinical treatment and drug discovery. Hence, recent drug discovery efforts on targeting the epigenome, has emerged an area of interest with several new drugs being developed, tested and some already approved by the US Food and Drug Administration (FDA). These new insights into the complexities of epigenetic regulation are key contributors to our basic understanding of this process in human health and disease, which will provide scope for innovative drug therapies. It is of urgency to aid the present understanding of epigenomics driven diseased outcomes, with the expectation that further studies will identify early markers of disease and targets for therapeutics.

This book compiles multidisciplinary efforts to conceptualize the environment in research and clinical setting that creates the fertile ground for the practical utility of personalized medicine decisions and also enables clinical pharmacogenomics for establishing pharmacotyping in drug prescription. Its covers innovative drug formulations and nanotheranostics, molecular imaging and signatures, translational nanomedicine and informatics, stem cell therapy approaches, modeling and predictability of drug response, pharmacogenetics-guided drug prescription, pediatric drug dosing, pharmacovigilance and regulatory aspects, ethical and cost-effectiveness issues, pharmacogenomics knowledge bases, personal genome sequencing, molecular diagnostics, as well as information-based medicine.

The topics chosen for this volume were selected because they are some of the current development or technological issues facing drug development project teams. They regard the practical considerations for assessment of selected special development populations. For example, they include characterization of drug disposition in pregnant subjects, for measuring arrhythmic potential, for analysis tumor growth modeling, and for disease progression modeling. Practical considerations for metabolite safety testing, transporter assessments, Phase 0 testing, and development and execution of drug interaction programs reflect current regulatory topics meant to address enhancement of both safety assessment and early decision-making during new candidate selection. Important technologies like whole body autoradiography, digital imaging and dried blood spot sample collection methods are introduced, as both have begun to take a more visible role in pharmacokinetic departments throughout the industry.

This book evaluates trends arising in “-Omics” sciences in terms of their current and potential future application to therapeutic design and understanding of disease. Chapters consider the impact of pharmacogenomics and bioinformatics on drug development, as well as trends in genomics, as applied to understanding of neurodegenerative and lung disease, psychiatry and oncology. Following the genome studies released in early part of this century, the advent of the -Omics sciences (genomics and pharmacogenomics, proteomics, metabolomics, transcriptomics) has seen the expansion of a vast knowledgebase with utility in preventing and treating disease, and improving health for all. Bioinformatics and improved pharmacogenetic understanding forge a path for improved drug discovery and design methods accounting for differences in delivery and disposition across populations.

Adverse drug reactions and interactions are still a major headache for healthcare professionals around the world. The US Food and Drug Administration's database recorded almost 300,000 serious adverse events in 2009 alone, of which 45,000 instances proved fatal. This updated new edition of the indispensable guide to drug interactions incorporates fresh research completed since the book's original publication by Humana Press in 2004. Additions include a new section on pharmacogenomics, a rapidly growing field that explores the genetic basis for the variability of responses to drugs. This new material reviews important polymorphisms in drug metabolizing enzymes and applies the findings to forensic interpretation, using case studies involving opiates as exemplars. Existing chapters from the first edition have in most cases been updated and reworked to reflect new data or incorporate better tables and diagrams, as well as to include recent drugs and formulations. Recent references have been inserted too. The handbook features extra material on illicit drug use, with a new chapter tackling the subject that covers cocaine, amphetamines and cannabis, among others. The section on the central nervous system also deals with a number of drugs that are abused illicitly, such as benzodiazepines, opiates flunitrazepam and GHB, while so-called 'social' drugs such as alcohol and nicotine are still discussed in the book's section on environmental and social pharmacology. Focusing as before on detailed explanation and incorporating both pharmacokinetic and pharmacodynamic drug interactions, this book will continue to be a lodestar for health and forensic professionals as well as students.

“Omics for Personalized Medicine” will give to its prospective readers the insight of both the current developments and the future potential of personalized medicine. The book brings into light how the pharmacogenomics and omics technologies are bringing a revolution in transforming the medicine and the health care sector for the better. Students of biomedical research and medicine along with medical professionals will benefit tremendously from the book by gaining from the diverse fields of knowledge of new age personalized medicine presented in the highly detailed chapters of the book. The book chapters are divided into two sections for convenient reading with the first section covering the general aspects of pharmaocogenomic technology that includes latest research and development in omics technologies. The first section also highlights the role of omics in modern clinical trials and even discusses the ethical consideration in pharmocogenomics. The second section is focusing on the development of personalized medicine in several areas of human health. The topics covered range from metabolic and neurological disorders to non-communicable as well as infectious diseases, and even explores the role of pharmacogenomics in cell therapy and transplantation technology. Thirty-four chapters of the book cover several aspects of pharmacogenomics and personalized medicine and have taken into consideration the varied interest of the readers from different fields of biomedical research and medicine. Advent of pharmacogenomics is the future of modern medicine, which has resulted from culmination of decades of research and now is showing the way forward. The book is an

honest endeavour of researchers from all over the world to disseminate the latest knowledge and knowhow in personalized medicine to the community health researchers in particular and the educated public in general.

In order to avoid late-stage drug failure due to factors such as undesirable metabolic instability, toxic metabolites, drug-drug interactions, and polymorphic metabolism, an enormous amount of effort has been expended by both the pharmaceutical industry and academia towards developing more powerful techniques and screening assays to identify the metabolic profiles and enzymes involved in drug metabolism. This book presents some in-depth reviews of selected topics in drug metabolism. Among the key topics covered are: the interplay between drug transport and metabolism in oral bioavailability; the influence of genetic and epigenetic factors on drug metabolism; impact of disease on transport and metabolism; and the use of novel microdosing techniques and novel LC/MS and genomic technologies to predict the metabolic parameters and profiles of potential new drug candidates.

This resource provides thorough coverage of pharmacogenetics and its impact on pharmaceuticals, therapeutics, and clinical practice. It opens with the basics of pharmacogenetics, including drug disposition and pharmacodynamics. The following section moves into specific disease areas, including cardiovascular, psychiatry, cancer, asthma/COPD, adverse drug reactions, transplantation, inflammatory bowel disease, and pain medication. Clinical practice and ethical issues make up the third section, with the fourth devoted to technologies like genotyping, genomics, and proteomics. In the fifth part, chapters discuss the impact of key regulatory issues on the pharmaceutical industry.

Troisième volume de la collection "Références en douleur et analgésie", cet ouvrage rassemble de la manière la plus complète possible les données récentes de la physiologie, de la physiopathologie et de la pharmacologie des douleurs. " Douleurs " car il n'y a pas une douleur mais bien plusieurs types de douleur ! Opposition entre douleur aiguë et douleur chronique, tout d'abord, qui ne mettent pas en jeu les mêmes mécanismes du fait, dans la douleur chronique, du prolongement dans le temps des mécanismes générateurs et de la modification des systèmes nociceptifs centraux liés à la neuroplasticité du système nerveux. Les douleurs chroniques sont elles-mêmes multiples, douleurs chroniques inflammatoires et douleurs chroniques neuropathiques, et répondent à des mécanismes distincts qui nécessitent une prise en charge thérapeutique adaptée. Les données physiopathologiques récentes, qui permettent de distinguer ces différents types de douleurs, sont exposées dans des chapitres bien différenciés. La description des modèles animaux utilisés pour la recherche expérimentale sur la douleur aiguë et sur la douleur chronique vient compléter celle de l'exploration de la douleur expérimentale chez l'homme. Des aspects auparavant peu pris en compte sont également exposés, comme la génétique et la génomique fonctionnelle, la pharmacogénétique des analgésiques et le rôle des stéroïdes endogènes. Enfin les classes de médicaments utilisés quotidiennement pour soulager ces différents types de douleurs font également l'objet de chapitres indépendants, AINS, antalgiques opioïdes et non opioïdes, antidépresseurs et antiépileptiques. Sans oublier les données récentes sur les bases neurobiologiques des effets placebo et nocebo qui jouent un rôle fondamental dans la réponse thérapeutique. Cet ouvrage très complet, abordant principalement des données fondamentales mais aussi cliniques, sera très utile aux professionnels de santé ainsi qu'à tous les étudiants du module 6 des études de médecine et des différents diplômes de la douleur (capacité, DESC, DIU) désireux d'approfondir leurs connaissances .

The detection and evaluation of adverse drug reactions is crucial for understanding the safety of medicines and for preventing harm in patients. Not only is it necessary to detect new adverse drug reactions, but the principles and practice of pharmacovigilance apply to the surveillance of a wide range of medicinal products. Stephens' Detection and Evaluation of Adverse Drug Reactions provides a comprehensive review of all aspects of adverse drug reactions throughout the life cycle of a medicine, from toxicology and clinical trials through to pharmacovigilance, risk management, and legal and regulatory requirements. It also covers the safety of biotherapeutics and vaccines and includes new chapters on pharmacogenetics, proactive risk management, societal considerations, and the safety of drugs used in oncology and herbal medicines. This sixth edition of the classic text on drug safety is an authoritative reference text for all those who work in pharmacovigilance or have an interest in adverse drug reactions, whether in regulatory authorities, pharmaceutical companies, or academia. Praise for previous editions "This book presents a comprehensive and wide-ranging overview of the science of pharmacovigilance. For those entering or already experienced in the pharmaceutical sciences, this is an essential work.” - from a review in E-STREAMS "...a key text in the area of pharmacovigilance...extensively referenced and well-written...a valuable resource..." - from a review in The Pharmaceutical Journal

This book serves as an introduction to genomics, proteomics, and transcriptomics, putting these fields in relation to human disease and ailments. The various chapters consider the role of translation and personalized medicine, as well as pathogen detection, evolution, and infection, in relation to genomics, proteomics, and transcriptomics. The topic of companion diagnostics is also covered. The book is broken into five sections. Part I examines the connection between omics and human disease. Part II looks at the applications for the fields of translational and personalized medicine. Part III focuses on molecular and genetic markers. Part IV describes the use of omics while studying pathogens, and Part V examines the applications for companion diagnostics. The book: • Introduces genomics, proteomics, and transcriptomics in relation to human disease and ailments • Considers the role of translation and personalized medicine in relation to genomics, proteomics, and transcriptomics • Covers molecular and genetic markers • Considers the role of genomics, proteomics, and transcriptomics in relation to pathogen detection, evolution, and infection • Covers companion diagnostics in relation to genomics, proteomics, and transcriptomics clinical applications and research

Building upon the foundation of basics discussed in the previous edition, the Second Edition provides a more in-depth look at the latest methods and technologies of advanced drug screening, an essential function of drug discovery. With extensively updated content and 21 new chapters, this text examines:quality and efficiency of drug target validati

Absorption, Distribution, Metabolism and Excretion (ADME) processes and their relationship with the design of dosage forms and the success of pharmacotherapy form the basis of this upper level undergraduate/graduate textbook. As an introduction oriented to pharmacy students, it is also written for scientist from different fields outside of pharmaceutics. (e.g. material scientist, material engineers, medicinal chemists) who might be working in a positions in pharmaceutical companies or whose work might benefit from basic training in the ADME concepts and some biological background. Pedagogical features such as objectives, keywords, discussion questions, summaries and case studies add valuable teaching tools. This book will provide not only general knowledge on ADME processes but also an updated insight on some hot topics such as drug transporters, multi-drug resistance related to pharmacokinetic phenomena, last generation pharmaceutical carriers (nanopharmaceuticals), in vitro and in vivo bioequivalence studies, biopharmaceuticals, pharmacogenomics, drug-drug and food-drug interactions, and in silico and in vitro prediction of ADME properties. In comparison with other similar textbooks, around half of the volume would be focused on the relationship between expanding scientific fields and ADME processes. Each of these burgeoning fields has a separate chapter in the second part of the volume, and was written with leading experts on the correspondent topic, including scientists and academics from USA and UK (Duquesne University School of Pharmacy, Indiana University School of Medicine, University of Utah College of Pharmacy, University of Maryland, University of Bath). Additionally, each of the initial chapters dealing with the generalities of drug absorption, distribution, metabolism and excretion would include relevant, classic examples related to each topic with appropriate illustrations (e.g. importance of active absorption of levodopa, implications in levodopa administration, drug drug interactions and food drug interactions emerging from the active uptake; intoxication with paracetamol as a result of glutathione depletion, CYP induction and its relationship with acute liver failure caused by paracetamol, etc). ADME Processes and Pharmaceutical Sciences is written as a core textbook for ADME processes, pharmacy, pharmacokinetics, drug delivery, biopharmaceutics, drug disposition, drug design and medicinal chemistry courses.

This revised and extended second edition focuses on current and emerging topics in drug development, their molecular mechanisms of action as well as regulatory issues. In addition, in-depth insights into clinical drug research and trial methodology are presented on the basis of concrete case studies. This updated book makes a valuable contribution to the field of Clinical Pharmacology and serves as a must-have guide for professors, researchers and advanced students from academia and pharmaceutical industry.

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The Specialty Section “Pharmacogenetics and Pharmacogenomics” makes part of two different Journals: Frontiers in Pharmacology and Frontiers in Genetics. This Specialty Section focuses on the mechanisms by which genetic variations influence drug effects and adverse drug events, and cover basic research, clinical translation, applications in drug development and regulatory issues related to this field. Also, studies addressing the role of other factors such as epigenetics, phenotypic factors or drug-drug interactions on drug pharmacokinetics or pharmacodynamics are welcome. The editorial board is composed of 34 Associate Editors which, together with the Guest Associate Editors and the Reviewer Editors, constitute a team of nearly 340 leading experts in the field of Pharmacogenetics and Pharmacogenomics. This guarantees high quality in the reviewing process as well as short review times. A look back: 10 years of Frontiers in Pharmacogenetics & Pharmacogenomics (Continued in eBook)