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BOOK REVIEW

Dhavendra Kumar and Charis Eng (eds): Genomic Medicine: Principles and Practice (Oxford Monographs on Medical Genetics) 2nd Edition

Hardcover, 24 October 2014, 852 Pages ISBN: 9780199896028, $195.00

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Since the publication of the first edition of this book in 2008, much has progressed in the field of medical genomics. We have seen the cost of genomic sequencing plummet, with the prediction of the $1000 genome by 2018 being met well in advance of that target, and a doubling of the number of genes identified as the basis of inherited disorders. This edition has undergone extensive revisions, with the new content reflecting just how much genomic technologies are now influencing all aspects of medical practice.

A stellar group of authors with deep practical experience in what the technology has to offer have been assembled to produce this volume, which is divided into two broad sections. The first section covers the broad principles of genomic medicine, bringing the novice up to speed on the structure of the human genome and its anatomy, and giving general overviews relating to a number of the key components of the "omic" puzzle including proteomics, epigenomics and the mitochondrial genome. In addition, there is a synopsis of developmental biology, as well as topics relating to environmental contributors to human health and disease including microbial genomics and nutritional genomics, and chapters providing outlines of how genomic technologies have helped advance the development of new drugs, and how genomic variation impacts on responses to drug, critical knowledge in this era of personalized and precision medicine.

The second and larger section of this book, aptly entitled Clinical Genomics, focuses on how genomic technologies are impacting on complex disorders, offering a number of chapters that are each focused on individual organ or tissue systems, as well as covering the impact of clinical genomics on cancer, infectious diseases, pediatric medicine and critical care medicine.

This book is well written and practical, but given the wide-ranging scope of the topics covered, of necessity only a helicopter view of the current state of genomic science could be presented. It is well placed to be a general resource for medical students, and medical and science graduates who are not expert in the fields of medical genetics and genomics.

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