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BOOK REVIEW

A further 'Strachan', more than before

Genetics and Genomics in Medicine
Edited by: Tom Strachan, Judith Goodship and Patrick Chinnery
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Every geneticist knows 'the Strachan and Read', probably the most popular textbook for Human Molecular Genetics. Now, the first author Tom Strachan from Newcastle upon Tyne, presents, together with two coauthors, a further textbook on 'Genetics and Genomics in Medicine'. Already the title tells us that the field has broadened and that knowledge has increased.

In 11 chapters, the following topics are discussed: fundamentals of DNA, chromosomes and cells including structure and function of nucleic acids and chromosomes and the cell cycle; fundamentals of gene structure and expression with the organisation of the genome; DNA technology with cloning, PCR, hybridisation and sequencing; genetic variation with DNA repair and polymorphism, especially for the immune system; single-gene disorders, especially Mendelian inheritance patterns, mitochondrial inheritance, Y-linked inheritance; heterogeneity and allele frequencies; gene regulation and epigenetics with uniparental disomy; genetic variation including chromosome aberrations and pathogenic variation on the phenotype; disease gene identification, especially genetic susceptibility to complex diseases; different approaches to genetic therapy; cancer genetics; and finally the spectrum and genetic testing, ethics of testing and therapy and gene patenting.

Each chapter ends with a summary, questions for self-testing and basic references. As compared with Strachan and Read, and well in line with the present development, more emphasis is given to genome–phenome correlation, genomics, variability and ethical issues. The amount of information in some 500 pages is amazing. Remarkable is the ability of the authors to explain difficult facts clearly, concisely yet still understandably. Many drawings and diagrams are excellent, being more or less self-explanatory. It is therefore useful for beginners and for specialists in any of the fields. The genetic variation in the immune system and pharmacogenetics will rarely be found explained in such a succinct form. A further plus is that the authors raise questions, they mention what cannot be explained at the present and sometimes even show humour or tap philosophical issues such as the statement that genetics is not everything in life.

Many readers including the reviewer will soon find that this book is exactly what they need to consult for questions not directly in their field of competence.

Criticism? The reader consulting just one chapter would appreciate finding all abbreviations in the glossary; the latter is quite incomplete. The same is true for the index: checking both for two terms, I did not find any of them. The chromosome chapter is somewhat rudimentary; although in general even exotic exceptions from general rules are only briefly mentioned, I did not find neo-centromeres; for UPD, chromosome 11 was chosen which seems rather unfortunate as neither paternal nor maternal UPD exists in liveborn, whereas UPD of other chromosomes, with or without abnormal phenotype, does exist. No book can fulfil the expectations of every subspecialist. For clinical geneticists more clinical examples would be helpful, but those given are well chosen. Vice versa, some researchers may wish to see more details in their fields.

To sum up, a very useful book. As it will be regularly consulted, the hard cover issue is recommended. ■

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