BOOK REVIEWS

Genetic Risks. A Reference for Eye Care Practitioners. William M Lyle. (Pp 515; \$60.00.) Canada: University of Waterloo Press. 1990.

This book is intended as a reference book for eye care practitioners, a North American term for ophthalmic opticians. There is a short introduction which covers mendelian and multifactorial inheritance, followed by 18 chapters of which three are devoted to the inheritance of ocular conditions. These three chapters form about half the book, the remainder of the chapters being divided into disorders of the various systems, for example, cardiovascular, gastrointestinal, metabolic, genitourinary, and others. Each disorder is described with its mode of transmission, and the prevalence is given wherever possible. Every chapter includes lists of disorders associated with a particular physical sign, for example, the 40 or so conditions featuring iris colobomas. The index is very good.

There is perhaps a need for text books written in simple language, intended for the professions allied to medicine. We are told in the foreword that professional genetic counselling is not always readily available. The danger is that genetic counselling based on this book could be in error. The description of the genetics of retinoblastoma is vague, muddled, and unfortunately contains several errors. For example, we read that "among all cases of retinoblastoma 35 to 45% are hereditary . . . , and 5 to 10% are bilateral and non-hereditary". The description of retinitis pigmentosa is difficult to follow because odd sentences appear in the wrong place. The reader is therefore led to believe that carriers of autosomal recessive RP may show a glistening, tapetal-like fundus reflex, while there is no mention of this reflex in the carriers of X linked RP. The author quotes Usher syndrome as being autosomal recessive or rarely X linked recessive. It is very difficult to check the source of the reference for the X linked type of Usher syndrome. (There is one little known reference for a possible X linked or autosomal

dominant form of Usher syndrome, but it does not appear in the bibliography.) Each chapter includes a bibliography which may contain 200 or more references, but no reference is cited in the text.

The reviewer feels that ophthalmic opticians who are interested in medical genetics would be better served by some of the other excellent books available.

MARCELLE JAY

Genes IV. Benjamin Lewin. (Pp 855; £45.00.) Oxford: Oxford University Press. 1990.

Lewin's book is exactly what its title says, an extended account of all we know about what genes are and how they work. The first 400 pages describe the traditional material of 1970s molecular biology; the structure, replication, and transcription of DNA and translation of messenger RNA in prokaryotes. There follow a very useful 200 pages on the packaging of DNA in nucleosomes and chromosomes, the constitution of the eukaryotic genome (repetitive sequences, gene families, and so on), and eukaryotic transcription (RNA splicing). Finally a series of chapters describe recombination, transposons, retroviruses, gene rearrangements, and oncogenes.

As an undergraduate textbook, *Genes IV* is aimed at students of biochemistry or molecular biology rather than the medical students whom most of us teach. Human genetics features, but not as a priority. A point is often illustrated by a mouse example even where a human example could have been used. This is not a criticism of the book, but an example of its emphasis, which is on basic genetic mechanisms and not on the genetics of any particular organism. You would recommend it as supplementary reading and reference, but not as a main course textbook for medical students.

Most readers of this journal would be more interested in this book as a convenient reference for background information on molecular biology. It is interesting to compare it with another candidate for that job, Alberts's *Molecular biology of the cell*, which I reviewed recently here (volume 27, p142). Both books are impressively large, over 800 and 1200 pages respec-

tively. Textbooks have improved amazingly since I was a student: it hardly needs saying that both books are attractively laid out, with abundant subheadings and pictures on every page.

For some topics there is no choice. Lewin does not set out to cover cell biology, so if you need to know about membranes, organelles, or cell interactions you would naturally use Alberts. You would also use Alberts if you want questions to test your grasp of what you have just read. For the topics which both books cover, Lewin's is the more approachable book. An excursion into *The molecular biology of the cell* always leaves me with mingled excitement and depression. Excitement that so much is known and understood, and that it is all beautifully set out in that book, but depression that I can never finish a topic because every page leads into an ever-expanding web of cross references, all full of things I ought to know but don't.

Lewin's *Genes IV* does not have either of these effects. The scope is more limited and the pace slower. You could for example read the 90 pages of part 6, 'The constitution of the eukaryotic genome', in an evening to shore up the foundations of your scientific knowledge. The production is perfectly efficient but less strikingly slick. Lewin's diagrams are not so highly finished as Alberts's, more like the things you might prepare on the overhead projector for a good lecture. It reads like one man's work while Alberts is very much a team effort. I noticed the occasional minor mistake (for example, some incorrect details on the dystrophin gene), but nothing to stop you relying on the book.

Overall then, this is a book you will not admire as much as Alberts's *Molecular biology of the cell*, but for the topics it covers you and your students might well end up using it more.

ANDREW P READ

Molecular Biology of the Islets of Langerhans. Ed Hiroshi Okamoto. (Pp 352; £45.00.) Cambridge: Cambridge University Press. 1990.

During the last decade, the spectacular advances in molecular biology have made it possible to study the structure and function of the genes involved in the pathogenesis of diabetes mellitus. This is a fast moving field with an