is clear, well illustrated, and pleasantly 'readable'.

For the rusty 'expert' or inquiring novice the first chapter introduces the ground rules of gene organisation and expression in man and bacteria providing a sensible foundation on which to introduce an array of elegant techniques currently in use. Chapters 2 and 3 describe methods of gene analysis from low resolution mapping to gene structure and expression studies including such innovations as automated DNA sequence analysis, computer gene search analysis, and, of course, the ubiquitous PCR. Chapters 4 and 5 focus on the actual recombinant part of the technology merrily 'walking' and 'jumping' all the way to the construction of genomic and cDNA libraries. The cystic fibrosis story provides an excellent example of positional cloning and general strategies used for identifying genes. The final chapters encompass more recent developments of cloning in higher organisms from YAC vectors to the generation of transgenic mice and the application of classical reverse genetics using ingenious gene targeting approaches for gene and developmental studies. This leads naturally to a potential for application in gene therapy and the study and cure of human diseases.

This book is a handy pocket guide to genetic engineering, ideally suited for clinicians, students, and researchers new to the subject or simply as a quick refresher for the specialist.

JOHN HARVEY

Molecular Genetics for the Clinician. D J H Brock. (Pp 289; £35.00.) Cambridge: Cambridge University Press. 1993.

In the preface to this book, David Brock states that its purpose is to inform clinicians about the impact of molecular genetics without either "blinding them with science in the first few pages or frustrating their intellects with immature sociology". He suggests that no book that successfully steers this path has previously been written, but that seems more than a little unfair on David Weatherall's *The New Genetics and Clinical Practice* (NGCP), published by Oxford University Press and now in its 3rd (1991) edition. In fact, the aims of the two books appear superficially fairly similar, making comparison inevitable. So, should one favour the Cambridge or the Oxford version? With the dubious record that I have attended both universities and still find the Boat Race a complete bore, I trust that I can be considered impartial.

Professor Brock's is the shorter book by about 100 pages and it sticks closely to its stated brief of describing the application of molecular studies to genetic disease. The text is arranged in nine chapters, covering the basic genetics of disease, DNA technology, types of mutation, gene tracking, cancer, molecular cytogenetics, multifactorial disorders, and future developments. It is well illustrated with numerous clear line drawings and photographs, although lacking colour the overall impression is less attractive than NGCP. On strictly genetic issues it is very comprehensive, more so than NGCP, and this doubtless reflects both the author's own background and the rapid developments in the field. Thus the interested clinician wishing to know more about very contemporary topics such as imprinting/uniparental disomy, use of the polymerase chain reaction in DNA diagnostics, fluorescence in situ hybridisation (illustrated with the only colour photograph!), X inactivation, the molecular basis of the fragile X syndrome, and screening for cystic fibrosis would find a fuller exposition in Brock's book, together with appropriate references for further reading. On the other hand the chapters on mutation and multifactorial disorders stick closely to classification and methodological aspects, and NGCP is likely to have more information on the molecular pathology of a disease of specific interest to the clinician. Brock also says little about the broader impact of the recombinant DNA revolution in fields such as infectious disease, cell biology, and biotechnology, but clearly he does not consider these to be part of his brief. Both books give only passing mention to germinal or somatic mosaicism, a pity since these encompass some interesting genetic phenomena.

In summary, *Molecular Genetics for the Clinician* is very clearly written, although lacking the laid back style of NGCP. There are very few errors. For those wishing to acquaint themselves from scratch with the current state of human molecular genetics, it would certainly be an excellent buy; but for the broader canvas, NGCP would still get my vote.

ANDREW WILKIE

The History and Development of Human Genetics. Ed K R Dronamraju. (Pp 303; £56.00.) Singapore, London: World Scientific Publishing Co. 1992.

One can never really appreciate a subject without knowing its history and this is nowhere more true than in human genetics. Dronamraju has been interested in the subject for many years and has written extensively on J B S Haldane. At the International Congress on Human Genetics in 1991, a satellite meeting, under the chairmanship of Dronamraju, concerned itself with the history of human genetics and the current volume represents some of the presented papers as well as others added later. The result is very variable.

In an opening chapter, James Neel lists nine reasons for the amazing transformation of the subject over the past 40 years. Most of these he attributes to various technical innovations. But I would add (having once been a plant geneticist) that there was in the early years a reluctance among most plant and animal geneticists to study humans because the subject was viewed as insufficiently challenging and unlikely to prove rewarding!

Other contributors to the volume address specific issues: the development of blood group genetics (Bodmer) and linkage analysis (Morton). These authors clearly could have written more extensively and in more detail on their chosen subjects and perhaps should have been encouraged to do so. Two chapters are by non-geneticists: Burian, a philosopher, on the development of human cytogenetics in France, and Olby, an historian, on the theory of hereditary diathesis. In my opinion these are the most rewarding contributions. They are well written and thought provoking.

The remainder of the book is a collection of chapters, each of which traces the development of the subject in various countries: Canada, France, Italy, Hungary, Japan, Israel, Egypt, Chile, Brazil, and India. Here, dare I say, some degree of chauvinism is sometimes evident! And there are also some notable absences.

Though this can in no way be considered a comprehensive history of human genetics, searching does reveal some interesting facts. For example, the end of wartime censorship allowed Wald to publish his sequential analysis developed for quality control of bombs using a statistic subsequently referred to as lods. Also the discovery of trisomy 21 by Lejeune, Gautier, and Turpin was achieved under the most primitive working conditions in a small laboratory without either gas or water and unimproved since 1900! But finding such gems requires a thorough reading as there is no index. And in a subject such as a history, to publish it in the unattractive format of 'camera ready copy' would seem to be unnecessary.

ALAN EMERY

Reproductive Risks and Prenatal Diagnosis. Ed M I Evans. (Pp 369; £73.10.) Connecticut: Appleton and Lange. 1992.

This extremely well presented book aims to give information about techniques for prenatal diagnosis of fetal abnormality within a framework of up to date genetics and counselling, recognising that for many physicians and co-workers their knowledge of genetics may be dated.

This is a multiauthor book of 25 chapters well organised into five main sections: general principles, risks in reproduction, clinical and laboratory diagnostic techniques, and management of fetal anomalies. Most readers will use it as a reference source, dipping into chapters, but it would certainly be feasible for a postgraduate student to read the whole book and emerge at the end having an up to date and comprehensive overview of reproductive genetics, counselling, and prenatal diagnosis.

The standard of all of the chapters is high; I would compliment particularly the chapter on genetic counselling which is of general value although organisationally written from a North American perspective. The first trimester ultrasound illustrations are clear and well annotated and throughout the book the line diagrams, illustrations, and general layout are good.

I have few adverse comments; the statement that high resolution chromosome analysis is not widely available is a little out of date, potentially teratogenic drugs are discussed in three sequential chapters, and fluorescent in situ hybridisation and preimplantation prenatal diagnosis are not discussed at all.

I would certainly recommend the book for obstetricians and geneticists in training, for genetic associates, and as a reference source for specialists in these two fields. As is the nature of genetics, this book will soon be out of date but the references quoted are up to 1990 and it is an excellent foundation for future editions.

DIAN DONNAI