Book reviews

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Mapping our Genes. Genome Projects: How Big, How Fast?
Congress of the United States, Office of Technology Assessment. (Pp 218; £19·00.) Baltimore: Johns Hopkins University Press. 1988.

In the early years of human gene mapping it was hard to point to any direct application of the information obtained. The late Peter Cook suggested that the main incentive was the challenge of an enormous crossword puzzle with only one solution. Times have changed, as evidenced by this book from the Office of Technology Assessment, and analytical arm of the United States Congress, whose role is to explore the physical, biological, economic, social, and political impact which can result from the application of scientific knowledge. This report details projects proposed by Federal agencies to construct maps of human and other chromosomes, to improve relevant databases and repositories, and to improve research methods and instruments. There is considerable emphasis on new research programmes supported by funds from the United States Department of Energy and the National Institutes of Health. However, there is also consideration of the research programme of the Howard Hughes Medical Institute, parallel programmes in the private sector, and the state of the art in other countries.

The second chapter covers, remarkably clearly in 25 pages, the technology of genome mapping, from family studies through somatic cell hybrids, in situ hybridisation, pulse field gel electrophoresis, and on to automated sequencing. The next chapter reviews possible applications to biology and medicine. A British publication would probably have faced more squarely the fact that the main practical use of human gene mapping at present is the selective termination of pregnancy.

Other chapters survey long term ethical issues, the existence and organisation of genome projects in the United States, activities in other countries, and the issues involved in technology transfer. As expected, the vast majority of contributors are American, although the names include Peter Newmark and David Weatherall. It is encouraging to read that the United Kingdom is "well placed intellectually, if not financially, to contribute significantly to the mapping of the human genome".

This is a well written, well presented, and well referenced book containing much factual information and ideally suited to what is presumably its main function, the enlightenment of members of the US Congress. It would make an excellent Christmas present for your MP; a political friend voted it much the most interesting and readable professional document she had seen in my hands. The role of this book in the life of a dedicated gene mapper or a working clinical geneticist is in the insight it gives into the future when the subject will become BIG science.

S Povey

Inherited Disorders of the Skeleton
2nd edition. By Peter Beighton. (Pp 491; £50·00.) Edinburgh: Churchill Livingstone. 1988.

It is exactly 10 years since the first edition of this book marked the introduction of a new series of system orientated monographs, designed not only for the clinical geneticist but also for the busy physician and surgeon who seeks a user friendly genetic guide to his or her subject. Much has happened in the intervening decade as reflected by this second and extensively revised edition. Each of the original chapters has been expanded and carefully updated to the extent that this new volume is almost double the size of the original version.

Furthermore a new chapter has been added and existing ones revamped to provide extremely useful accounts of notoriously difficult areas, such as lethal short limbed dwarfism and the overgrowth disorders. The author does not attempt to provide a definitive review of any of these subjects but concentrates instead on ensuring that important clinical and diagnostic points are covered. The comments on likely mode of inheritance are apt and succinct and there is a carefully selected yet comprehensive bibliography for those who wish to pursue a particular disease in depth.

Overall it is remarkably difficult to find fault with this well written and lavishly illustrated authoritative text. Throughout, the emphasis is on the provision of practical information concerning the clinical, radiological, and genetic aspects of a bewildering number of rare and not so rare disorders. It is equally difficult to envisage how any clinical geneticist could manage without having ready access to this the latest in a long line of scholarly reviews to emerge from Professor Beighton's word processor. It is to be hoped that we shall not have to wait another 10 years for the third edition.

I D Young