

friendly guide, mainly in historical form, to the isolation and preliminary analysis of some very important genes.

In the style of this series each chapter starts with an abstract. The first chapter by Lap-Chee Tsui and Xavier Estivill is entitled 'Identification of disease genes on the basis of chromosomal localization'. The abstract reads as follows:

"Chronic granulomatous disease was the first human disease gene to be identified on the basis of its chromosome localization. Prior knowledge of its biochemical defect made the gene identification relatively easy.

"Duchenne/Becker muscular dystrophy is the largest gene known in the human genome. Deletions are the most common mechanism causing the disease. There is no shortage of landmarks for delimiting the disease locus.

"Retinoblastoma represents a unique genetic system for studying mechanisms of somatic mutations and an excellent model for understanding the role of recessive oncogenes in tumorigenesis.

"Cystic fibrosis shows that it is possible to identify a disease gene solely on the basis of linkage analysis, without any chromosome rearrangements pointing the way.

"Choroideremia provides an extreme example in which only a little can be learned about the basic defect through cloning of the gene.

"Neurofibromatosis type 1 is caused by mutation in a large gene with at least three smaller genes embedded in one of its introns; the gene identification presents an application of human/mouse comparative gene mapping.

"Wilms' tumor demonstrates the difficulty of having too many candidate genes present in a small region of chromosome."

A magnificent attempt at a Complete History Of The (genetic) World In 7½ Chapters. The same chapter ends with some thoughts about the role of competition, triumph, and disaster in medical research.

Another chapter verging on the philosophical, historical, and at times almost hysterical is 'Cloning the mammalian sex-determining gene, TDF' by Peter Goodfellow, J Ross Hawkins, and Andrew H Sinclair. Many interesting lessons can be learnt from this chapter, not least the importance of key clinical material and the sheer hard, and often discouraging, work involved in such a project.

The other chapters have perhaps a less conversational style but are still packed with useful information. 'Molecular genetics of Wilms' tumor' (Jerry Pelletier, David Munroe, David Housman) contains much of importance to geneticists trying to understand the emerging story of the relationship between mutations in the WT gene and nephroblastoma, Beckwith-Wiedemann syndrome, DRASH syndrome, and other developmental anomalies.

Equally important not to miss is the chapter on 'Genetic analysis of multifactorial disease: lessons from type-1 diabetes' by Soumitra Ghosh and John A Todd. The stated aim to provide a concise review of the methodology used in the analysis of complex disease genetics is achieved well with simple mathematical examples which will educate even the less numerate. The genetic analysis of common diseases is an important developing area and this chapter will promote understanding.

The other two chapters cover 'The mouse t complex responder locus' (Linda C Snyder and Lee M Silver) and 'Molecular biology of the W and Steel loci' (Alistair D Reith and Alan Bernstein).

S MALCOLM

**Community Genetics Services in Europe.** A Report on a WHO Survey. B Modell, A M Kuliev, M Wagner. WHO Regional Publications, European Series No 38. (Pp 137.) Copenhagen: WHO Regional Publishers. 1992.

If the 1980s saw the coming of age of molecular genetics, then the 1990s will see the maturation of 'genetics in the community'. This monograph, sponsored by WHO, is an up to date and detailed survey of present community genetic services in Europe, a region which has a population of 850 million. In an introduction, the problems are identified, especially that genetic services have usually developed idiosyncratically and not on a rational or equitable assessment of patient needs. The book emphasises the essential two way relationship between knowledge about the service in the lay community

and the laboratory and clinical services. Other problems are that the genetic services required by specific groups must be appropriate, there needs to be collaboration between primary, secondary, and tertiary health care, there must be public health involvement and careful assessment of the technology, and ongoing evaluation including, among other aspects, ethical issues.

Part 1 covers the basic statistics available and provides an excellent and brief overview of the need for genetic services. The figures for the incidence of genetic diseases are augmented by basic demographic information which includes 30 separate countries. Although recent political changes have caught up with some of those figures (Germany, USSR, or Yugoslavia), there is enough breakdown to make it possible to devise appropriate services in each of the main political regions. Part 2 describes the existing community genetic services with regard to screening for Down's syndrome (based on risk estimation calculated for increased maternal age). There is also the model of screening for autosomal recessives, exemplified by Tay-Sachs disease and haemoglobinopathies in different ethnic groups. The data here are well organised and give a clear indication about what needs to be done. For example, fig 9 analyses the causes of the birth of 193 children with thalassaemia and shows that in 55% of these births the basic reason was patient ignorance and in a further 26% it was based on the obstetrician not arranging testing.

Part 3 moves on to the approaches necessary to provide adequate service delivery, emphasising appropriately the importance of information and education of the public. There is a cost benefit analysis which emphasises not only financial but psychological and other costs.

Part 4 gives an excellent summary of the community genetics services available in Europe and lists 11 recommendations which would be important considerations in any country setting out to improve their genetic services. These recommendations will not be repeated here since I judge that every clinical geneticist will want to read this excellent book. It should also be on the shelf of every Regional Medical and Scientific Officer as well as any other purchaser of genetic services.

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