pigmentosa. These proceedings are divided into a number of sections, including clinical aspects, tests of visual function, molecular genetics, biochemistry, morphology, immunology, and lipid metabolism, and each section contains papers that provide an up to date account of the present state of our knowledge. The book addresses a wide readership because of the scope of the topics which have been included and, in addition to those involved in research into retinitis pigmentosa, clinical geneticists and ophthalmologists will find much to interest them here. The multidisciplinary approach, so important to research today, has been presented by a group of acknowledged experts, and the reader should welcome the opportunity to savour the work presented by those in other disciplines. Since much of the work presented is that of workers whose native language is not English, the reader is sometimes obliged to make a small effort to follow what has been written. There are a few, and these are very few, lapses in the editing, for example, RLFP for RFLP, but the standard of editing is, on the whole, high. The editors are to be congratulated on the efficiency with which they have collated this book, which is recommended to all those interested in inherited disorders of the eye.

MARCELLE JAY

Fetal Diagnosis of Genetic Defects

Bailliere's Clinical Obstetrics and Gynaecology. Volume 1, No 3. Edited by C H Rodeck. (Pp 768; £15.00.) London: Bailliere Tindall. 1987.

This book on prenatal diagnosis is intended primarily for obstetricians. It covers the recent growth areas such as chorion villus sampling, diagnostic DNA analysis, ultrasound diagnosis of structural defects, and the use of maternal α fetoprotein in refining Down's syndrome screening. There are also useful chapters on malformation in twins, the management of the prenatal diagnosis patient, and the prospects for preimplantation diagnosis. All the contributors are acknowledged experts.

Despite its 1987 date, the book is reasonably up to date. If it were being rewritten now there would be more on the polymerase chain reaction, the Duchenne muscular dystrophy gene deletions, and the associations with cystic fibrosis shown by the more recent probes. Few of the chapters contradict one another, the most obvious exception being the recommendation by Nicolaides and Campbell that amniocentesis is unjustified in the exclusion of neural tube defects where the prior risk is increased

by a raised maternal serum AFP or family history. Wald and Cuckle disagree, and perhaps an editorial comment would have been helpful.

For obstetricians, the book can be strongly recommended as an authoritative update on this important area of practice. They will need to bear in mind that some of it will quickly become out of date.

For clinical geneticists the combination of closely packed information, most of which is already familiar, makes for rather arduous reading and I think few of them will want to buy it. If they do, they will be glad of the references, which are numerous, and many of which relate to items of clinical wisdom often taken for granted.

N R DENNIS

The Prevention and Avoidance of Genetic Disease

Edited by J H Edwards, Mary F Lyon, and E M Southern. (Pp 157; £32.50.) London: The Royal Society. 1988.

This book is the written version of a conference organised by the Editors at The Royal Society in April 1987. A series of eminent speakers give 'state of the art' reviews of a range of fields relevant to the title.

The Editors are anxious not to confuse prevention with avoidance and, accordingly, three of the contributors discuss the problems of measuring and controlling mutation rates, giving the book a broader base than many treatments of the 'prevention' of genetic disorders. Other recurring themes are the feasibility and potential utility of a complete map of the human genome, and the exploration of techniques and approaches for bridging differences of scale, from visible chromosome deletion to invisible megabase deletion and from kilobase to megabase molecular mapping.

The sense of excitement at the molecular tools available is tempered by some level headed accounts from Edwards, Weatherall, and Bobrow of the limits to prevention and avoidance imposed by fresh mutations, molecular heterogeneity, and doctors' and patients' perceptions of disease burden.

'Multifactorial' diseases and chromosome abnormalities receive rather fleeting mention. Mikkelsen's chapter on Down's syndrome was written too early to include a discussion of maternal HCG and oestriol levels, but otherwise says all that can be said until more is known about the causes of non-disjunction. Strategies for the identification of individual genes involved in 'multifactorial' disorders could have furnished a useful chapter.

The book appears to be addressed to the initiated; no concessions are made to those unfamiliar with the concepts used. It would be ideal for someone who has had two or three years away from human or medical genetics and who wants a rapid update (significant advances since the date of the conference in knowledge of the dystrophin gene and of the cystic fibrosis region are covered by notes added in proof). It can also be recommended to trainees in medical genetics from either a clinical or laboratory background, especially if they use it as a key to recent publications. Given its rather limited appeal, however, I am unconvinced of the justification for publishing the proceedings of what was undoubtedly a valuable meeting.

N R DENNIS

Advances in Human Genetics

Volume 17. Edited by Harry Harris and Kurt Hirschhorn. (Pp 209; £49.50.) New York, London: Plenum Press. 1988.

Since the first volume appeared in 1970, this series has established itself as authoritative reviews on all aspects of human genetics. However, because the subjects covered have on occasions been somewhat specialised, some volumes may have been outside the immediate interests of any individual medical geneticist. This is not so with this recent volume for four of the five subjects covered will be of interest to most practising geneticists. The one exception is a chapter on human salivary proteins and their polymorphisms which may have restricted appeal but is nevertheless a scholarly and detailed review. The remaining four chapters deal with chorionic villus sampling, the molecular genetics of the haemophilias, cloning of the Duchenne/Becker muscular dystrophy locus, and molecular and recent cytogenetic studies in Down's syndrome.

Chorionic villus sampling has become an established procedure for the prenatal diagnosis of most genetic disorders and worldwide analysis of some 20 000 cases now indicates that the risks of the

procedure are very small. The applications in chromosome, metabolic, and DNA analyses are discussed. It seems clear that investigators are often not satisfied with direct methods of analysis and short term culture of villus material is preferred. It is also clear that in the case of metabolic disorders there have been discrepancies in the diagnostic evaluation in several cases which emphasises the importance of experienced laboratory facilities in this area.

Details of the range of molecular defects in the haemophilia A gene (186 kb with 26 exons) and the haemophilia B gene (34 kb with eight exons) are being revealed. However, the relationship of deletions to the presence of inhibitors to F VIII and F IX is still not understood and so far no clear picture has emerged concerning the association of inhibitor formation and the size and position of deletions. The identification of DNA polymorphisms within the F VIII and F IX genes has revolutionised carrier detection and prenatal diagnosis in these disorders.

The story of the localisation of the Duchenne/Becker gene and the subsequent isolation of its product is well surveyed by Monaco and Kunkel, who have contributed so much to this field. Astonishingly much of this brilliant work by the first author represented requirements for a PhD at Harvard! To quote the poet W B Yeats:

All his twenties crammed with toil;
"What then?" sang Plato's ghost. "What then?"

In our onward rush to study molecular genetics, we perhaps should remember that many other problems in human genetics still remain to be solved, and this is nowhere more evident than in Down's syndrome. The authors of this review show how the new cytogenetic and molecular studies may provide helpful information on such matters as the origin of non-disjunction, how maternal age is relevant, and the possible effects on the phenotype of the parental origin of trisomy.

There is much to interest most medical geneticists in this volume.

ALAN E H EMERY