very useful for educated, biologically aware, motivated parents, such as are more likely to be found in North America or presumably Israel, Professor Goodman's natural habitat. Sadly it is a lot less likely to be understood by the majority of adults in the UK, where education in biology relevant to health and reproduction has been neglected for many years. The text assumes a familiarity with biological terminology and the concept of risk, which is unfortunately rarely the case with the average British parent.

Nevertheless, there are other audiences for whom it can be recommended. It should certainly be useful for the primary health care teams, practising midwives, and perhaps even some practising obstetricians, to whom many of the questions are regularly addressed in their day to day work. The direct, simple style should also guarantee the book a warm welcome in some departments of clinical genetics.

I have no real criticisms. At \$16.95 it is expensive for its targetted lay audience in this country and a cheaper paperback edition would be more appropriate for the British market. There is a surprising absence of any reference to the emotional consequences of pregnancy termination for genetic reasons. This should be rectified in future editions. Some of the selected book references are more suited to a medical than a lay audience. I doubt if many parents would want to curl up with Dr McKusick's superb catalogue for bed time reading! These are minor points; the book deserves to be widely read and I enjoyed it.

J S FITZSIMMONS

Duchenne Muscular Dystrophy

Oxford Monographs on Medical Genetics No 15. By Alan E H Emery. (Pp 315; £35.00.) Oxford: Oxford University Press, 1987.

It showed great foresight on the part of Alan Emery and the publishers to produce a book devoted entirely to a disease that has probably had more written about it in the 1980s than any other condition. It was a wise decision: the monograph is not just an account of what everyone knows. It gives a comprehensive and critical assessment of every aspect of Duchenne muscular dystrophy, to suit research workers, clinicians, and physiotherapists and others who are concerned with the management of muscular dystrophy.

After a brief introduction to the physiology and anatomy of muscle, there is a fascinating history of the first descriptions of Duchenne muscular dystrophy. Here we learn that the first diagnosis was

made by Dr Meryon of St Thomas's Hospital, who also reported an X linked pedigree, about 17 years before Duchenne. It is interesting later in the book to read a reprint of the obituary of Duchenne which appeared in the *Lancet* of 1875. Photographs of neurologists of the last century are accompanied by a modern one of P E Becker who described the more benign type of X linked muscular dystrophy during the life time of many patients alive today. Chapter 3 is remarkable for some valuable tables presenting the variation in the natural history of the disease, based on Professor Emery's large series of personal cases. These are followed by a critical account of investigations used in the diagnosis of Duchenne muscular dystrophy, and in its distinction from other neuromuscular diseases. Emery discusses biochemistry and possible pathogenetic mechanisms and later there is a long and useful chapter on management, in relation both to individual patients and to the liaison between community services and lay organisations.

The chapters on genetics, genetic counselling, and molecular biology are particularly interesting to readers of this Journal. These chapters are very clear, practical, and up to date. The approach is wide ranging and non-controversial, although Professor Emery does point out some features of Duchenne muscular dystrophy that are not fully explained. He asks, for example: Why is the disease so common? Do postzygotic mutations occur? Why are some boys mentally retarded? Why is the proportion of female carriers detected through creatine kinase estimations different from that estimated from the proportion of affected sons? Why do DNA deletions fail to correspond with the clinical picture? Why do some families have more than one new mutation for Duchenne muscular dystrophy?

This book is timely and useful; it stimulates as well as teaches. I can recommend it for all those doctors, scientists, and paramedical staff who work with muscular dystrophy, and probably some parents would also find it interesting.

SARAH BUNDEY

Human Genetic Diseases: A Practical Approach

Edited by K E Davies. (Pp 160; £22.00 hardback. £14.00 softback.) Oxford: IRL Press. 1986.

The contents of the various chapters in this volume of the, now quite extensive, Practical Approaches Series covers both routine and research applications of molecular genetics as applied to human genetic disease. The first chapter by John Old is called 'Fetal DNA analysis', but in addition to a discussion

of methods of sampling and analysis also contains detailed protocols for DNA extraction and Southern blotting, which should be most useful to anyone wishing to carry out human genomic analysis. A basic knowledge of nucleic acid biochemistry and techniques is assumed.

The second chapter, 'A short guide to linkage analysis', by Jurg Ott, contains some excellent definitions of basic concepts including PIC and lod. However, I rather doubt that most novices would feel able to start calculating recombination fractions without further assistance. Similarly, new workers will feel reassured that well tried computer programmes are available but will not be able to set up a LIPEd file on the information given here.

The chapters on synthetic oligonucleotide probes (Swee Lay Thein and R Bruce Wallace) and characterisation of the transcriptional unit (M Antoniou, E de Boer, F Grosveld) both give a general outline of principles and applications, followed by specific points to consider and finally detailed protocols. I would personally be happy to try oligonucleotide hybridisation based on the protocols described here. Two further chapters on 'Alternative methods of gene diagnosis' (which covers sandwich hybridisation and non-radioactive methods of detection) and 'Human chromosome analysis by flow cytometry' cover fairly specialised applications. Only five pages are devoted to non-radioactive detection of nucleic acids with sufficiently little comparison of the advantages and disadvantages of the techniques that it is not really possible for a new laboratory to decide which method, radioactive or non-radioactive, to invest in. This is probably a reflection of the speed with which these techniques are being developed and interested parties should watch the literature and trade bulletins carefully.

The final chapter describes the relatively new but most exciting technique of pulsed field gel electrophoresis and contains excellent illustrations of the various points discussed.

One slight criticism of the book is that the same techniques (particularly Southern blotting) are described many times. However, perhaps this serves to make the point that for many of the procedures there may not be a 'best' method and considerable variations in technique can still give a good result.

S MALCOLM

Genetic Aspects of Developmental Pathology

Edited by Enid F Gilbert and John M Opitz. (Pp 522; \$84.00). New York: Alan R Liss. 1987.

This volume contains selected papers and proceedings of a symposium held in September 1985 in

Madison, Wisconsin, USA, as part of the interim meeting of the Society of Pediatric Pathology. It contains a mixture of papers, ranging from good reviews through 'oddities we have seen in our department over the last two or three years' type papers to single case reports. There is much that will be useful to the clinical geneticist or paediatric pathologist: reviews of the developmental pathology of collagen, pathological findings in 5,10-methylene tetrahydrofolate reductase deficiency, glutaric acidemia type II, neonatal haemochromatosis, hepatic involvement in hereditary renal syndromes (an excellent review), lissencephaly syndromes, and more besides. Of the personal experience papers, I would single out that by Dr Dagmar Kalousek on anatomical and chromosome anomalies in specimens of early spontaneous abortion as being extremely useful. All in all a very informative book to have on the shelves of a genetics or pathology department.

ROBIN M WINTER

Genetic Disorders and the Fetus

2nd edition. Edited by Aubrey Milunsky. (Pp 895; \$89.50). New York: Plenum Press. 1986.

The first edition of *Genetic Disorders and the Fetus* appeared in 1979, at the end of the first decade of the practical application of prenatal diagnosis to chromosomal disorders, inborn errors of metabolism, and congenital malformations. As a comprehensive summary of the state of the art it had few peers, and it became the reference text for genetic counsellors, obstetricians, and laboratory personnel. More than half of the first edition was the personal work of Aubrey Milunsky, whose command of the literature and dedication in seeking out obscure references was one of its most impressive features.

The uses of prenatal diagnosis have expanded considerably over the intervening seven years, and this fact is recognised in the second edition, which has become an edited text with 46 contributing authors. There are new chapters on the fragile X syndrome, on the haemoglobinopathies, on connective tissue disorders, and on flow cytometry of metaphase chromosomes. The section on metabolic disorders is divided into ten separate chapters, with various experts called in to give breadth and depth to the presentations. The only casualty from the first edition is the omission of the chapter on the role of infectious agents in the causation of birth defects.

The most important new developments in prenatal diagnosis are the use of chorionic villus sampling for first trimester detection of affected fetuses and the application of molecular genetic