one affected child their next three pregnancies are likely to be unaffected.

Otherwise this book is a useful starting point for health professionals wanting to learn quickly what to do when confronted by someone who is at risk of haemoglobinopathy, particularly hospital doctors, medical students, and general practitioners. Nurses and other paramedical professionals may find it of more limited use.

MARY CHOISEUL

Molecular genetics of neurological and neuromuscular disease

Advances in Neurology Volume 48. Edited by S DiDonato, S DiMauro, A Mamoli, and L P Rowland. (Pp 228; \$62.50.) New York: Raven Press. 1987.

This multiauthor volume arose out of a meeting held in September 1983. However the chapters have been updated to include 1986 so that many recent advances in molecular genetics in relation to neurology have been included. The volume contains excellent review chapters by Rowland and Wood, and detailed accounts of original work concerning investigation of genetic disease by molecular genetic and biochemical methods and strategies concerning treatment.

One of the most exciting chapters is that by DiMauro *et al* concerning the gradual elucidation of the mitochondrial myopathies. These myopathies are characterised by the appearance of ragged red fibres on muscle biopsy and by some evidence of mitochondrial dysfunction. The use of the term 'mitochondrial' does not imply that inheritance occurs by mitochondrial genes. The authors explain the classification into five biochemical groups and they describe in detail the varying clinical pictures of cytochrome C oxidase deficiencies, with their different patterns of inheritance. DiMauro's group is embarking not only upon an analysis of gene structure and action, but also of the relationship between mitochondrial and nuclear gene expression. Other chapters describe studies on acyl-CoA dehydrogenases, and here there is particular interest

attached to the medium chain acyl-CoA dehydrogenase which is often deficient in Reye's syndrome.

Another particularly interesting chapter is that by Saraiva *et al* giving an account of the different mutations of transthyretin (previously known as prealbumin) in patients with dominant amyloid neuropathy. Several different point mutations in this protein have been identified, but a surprising observation is that one particular mutation is common to most Greek, Italian, Portuguese, Japanese, and Swedish patients, in spite of clinical differences in the manifestation of dominant amyloid neuropathy in these races.

There are two useful chapters on treatable causes of ataxias and neuropathies and these should be constantly referred to as an important reminder to search for metabolic causes of disease. The interesting and important condition of ornithine transcarbamylase deficiency, with its need for prompt treatment in female carriers, is described by Fox and Rosenberg.

There are chapters on the strategies for finding the genes for Huntington's disease, myotonic dystrophy, and Friedreich's ataxia containing helpful accounts of techniques available and accompanied by clear diagrams. Two chapters describe the origin of mutations in families with X linked muscular dystrophy and experience with prenatal diagnosis. These chapters are of limited value because of the recent rapid advances in the subject.

However, apart from such inevitable omissions of new data, this is an excellent collection of articles, making the volume a worthy member of the Advances in Neurology series. It presents a wide and varied account of molecular strategies in relation to neurological and neuromuscular diseases, and few readers will already know about all of them. The book is useful in drawing together experts in biochemistry and molecular genetics, as well as neurologists and clinical geneticists, so that each may benefit from other approaches. It must be a valuable and stimulating source for postgraduate students entering the fields of molecular genetics or neurology.

S BUNDEY