instability syndromes (in which they include xeroderma pigmentosum), detailing the spontaneous and inducible cytogenetic characteristics of each. The multiple complementation groups observed in xeroderma pigmentosum and ataxia telangiectasia are discussed together with the elucidation to date of the defects underlying these conditions, Bloom's syndrome and Fanconi's anaemia. Parts of the chapter are hard going for the non-specialist, particularly a section describing the conflicting evidence for circulating clastogens. The clinical features of these four conditions are briefly reviewed together, and a short section on prenatal diagnosis is provided. Results from the most recent molecular studies are to be found in the addenda in the back of the volume. I would have found most useful a flowchart summarising the distinguishing cytogenetic characteristics of these conditions and the related, but undiscussed, disorders.

In the third chapter, Robinson succinctly discusses the diverse spectrum of inherited metabolic disorders leading to lactic acidemia. Attention is focused on recent advances in understanding of the structure, function, and dysfunction of the pyruvate dehydrogenase complex, components of the mitochondrial respiratory chain and pyruvate carboxylase. The genetics of the enzyme complexes involved in these central metabolic pathways is complex, but integration of molecular and biochemical research is helping to improve definition of this group of disorders, each of which is associated with great clinical heterogeneity.

The final chapters share a common theme of growth; in one Cohen gives a clinical review of overgrowth and the overgrowth syndromes, the other from Phillips and Vnenacak-Jones is a clearly written summary of the genetics of growth hormone and its disorders. Cohen's review is extensively referenced and descriptive rather than mechanistic. It is aimed primarily at the clinician. It is easy to read and will prove interesting and useful to a variety of specialists. In the last review the anatomy, function, and regulation of the growth hormone gene cluster are covered. Molecular pathology is related to the recognised deficiency states. Although the chapter is brief and interesting the reader is perhaps reminded that it possesses the second of these virtues a little too often.

The fact that these reviews are all relevant to the clinical geneticist indicates the strength of the links between basic research and clinical practice in this discipline. The volume will be of interest and value to clinical and human geneticists alike.

J Sampson

Twinning and Twins
Edited by I MacGillivray, D M Campbell, and B Thompson. (Pp 321; £52.00.) Chichester: John Wiley. 1988.

The general public as well as the medical and scientific community are fascinated by twins. A number of eminent medical geneticists are either a twin themselves or have children who are twins. One might speculate on which is 'chicken and egg'.

Although this is a multi-author book with a number of contributors, many of the chapters are written by or written in conjunction with one of the three editors because of the long standing interest in twinning and twins in Aberdeen by the editors and their colleagues.

This book could be of interest to obstetricians and paediatricians as well as geneticists as it has wide variety of chapters covering the epidemiology, aetiology, and types of twins, physiological changes in and management of pregnancy, labour, and delivery, as well as the outcome as far as birth weight, intelligence, and congenital anomalies. The text is well referenced in general and the discussion on the possible mechanisms for congenital anomalies in twins was of particular interest.

A seemingly unavoidable criticism in multi-author texts is that the early chapters on aetiology, epidemiology, and factors affecting and types of twinning are, perhaps unavoidably, repetitive in the material they discuss and cite.

While this book fairly comprehensively covers most aspects of twinning and twins, it is to be recommended as a useful reference on the subject rather than a 'cover to cover' read.

R F Mueller