and again to the so-called 'myotubular', 'central core', 'nemaline', and 'mitochondrial' myopathies, whose recognition has stemmed largely from the use of electron microscopy in diagnosis. There are stimulating sections too on the medical and orthopaedic treatment of cases, and on the diagnostic value of clinical myography, each of these being handled by specialists in the field.

Of particular clinicopathological interest is the analysis of the biochemistry of the myopathies written by Laudahn, who is head of the department of clinical investigation of Schering AG. This, although comprehensive, centres upon the study of the serum and muscle enzymes in the myopathies. The diagnostic value of high levels of, for example, creatine kinase in the Duchenne type of dystrophy is, naturally, accepted. On the other hand, the authors stress that lower levels are encountered in the less crippling forms of muscular dystrophy, which overlap with levels encountered in cases suffering from various forms of neurogenic atrophy of muscle. As Dubowitz and others have noted, however, it is probably important when comparing serum-enzyme levels in different diseases to take account of such factors as the activity of the disease and the extent to which the various patients use their affected muscles. Laudahn's biochemical section includes over 1,000 references, and will be invaluable to research workers in the field.

To summarize, this clinicopathological analysis of the myopathies is fully up to the standard to be expected from handbooks published by Springer. It provides a thoughtful and critical analysis of a group of diseases whose relentless and crippling progress must excite our sympathy and interest. It is true that comparable publications are available in this country, in particular those written by Walton and his team in Newcastle. Nevertheless, Heyck and Laudahn's monograph is strongly to be recommended, both because of its value as a source of references and because it emphasizes aspects of the myopathies with which many readers may be unacquainted.

J. C. SLOPER

Elements of Medical Genetics By A. E. Emery. (Pp. ix + 247; illustrated 35*s*.) Edinburgh and London: E. and S. Livingstone. 1968.

In spite of a spate of monographs and general texts on medical genetics published in the last few years there has been no elementary book, covering both fundamental human genetics and clinical genetics, suitable for medical students. Professor Emery seeks to fill this gap with 'Elements of medical genetics'.

On the whole his book succeeds in its aim. It is short, readable, and is illustrated by clear line drawings and diagrams. For these reasons it stands a fair chance of actually being read by medical students. The main criticism is of what they will read, especially in relation to fundamental genetics. Following an appropriate historical chapter there are three chapters outlining molecular genetics, human biochemical and immunogenetics, cytogenetics, and developmental genetics. There has been an outburst of exciting discoveries in these topics in recent years which, presumably for the sake of brevity, have here been oversimplified. This results in some subjects being discussed too briefly to convey a clear picture of what they are all about. For example, in a brief section on the genetic code non-sense and missense mutations are referred to without any description of how they arise. Again in the chapter on developmental genetics our appetites are whetted by mention of sea-urchin eggs. Much of our present knowledge of development stems from research on sea-urchin eggs but here a simple brief fact only is mentioned. In both these instances important topics are raised that deserve either fuller treatment or complete omission. Oversimplification has the further consequence that incorrect statements occur, such as that 'males with two Y chromosomes are often delinquent', that 'DNA is found only in chromosomes' or that 'phenylketonuria is completely prevented by early diet'. Nor do we know that the features of Down's syndrome are the 'result of genes on the extra chromosome'.

This condensed treatment of fundamental genetics also results in the omission of important topics. Why, for example, are protein polymorphisms included but not those of enzymes. Apart from brief references to the ABO blood groups in several places and other blood groups in relation to linkage, the only account of immunogenetics is a short description of the immunoglobulins. Linkage itself also gets brief treatment.

The chapters on Mendelian inheritance of human disease and genetic factors in common diseases give a very clear picture of the mechanisms involved, including the relationship of phenotype to genotype. Multifactorial inheritance, for which there is increasing evidence in common diseases, needs more than the page and a half devoted to it. Further chapters discuss pharmacogenetics, population genetics, and genetic effects of radiation. The chapter on this last topic is one of the best in the book. The final chapter, headed 'Genetics and the physician', is in fact a sound introduction to genetic counselling.

Professor Emery's book provides the elements of clinical genetics but not really of the more fundamental aspects of medical genetics.

M. d'A. CRAWFURD

Biochemistry of Cell Division Edited by R. Baserga. (Pp. xii + 214; illustrated $15·00.) Springfield, Illinois: Charles C. Thomas. 1969.

This book stems from a meeting (they call it a workshop) held in April 1968 to discuss some of the problems of research in cell division.

The introduction by Baserga is an admirable guide to the topic as a whole. Briefly the main problem is that while a lot of biochemical events can be described and accurately measured during different phases of the cell cycle, it is difficult to distinguish which are the key events, how they are causally linked, and how critical thresholds of activity are devised. For example, as Lieberman points out (p. 134), in DNA synthesis an explanation is needed of 'how a second cycle of synthesis is prevented from beginning during or immediately after replication, how different chromosomes and different parts of the same chromosome can be replicated at different times during synthesis, and how replication can be stopped at precisely the time when the genome has been doubled'.

Although the subject is rather peripheral to applied pathology it is as well to be aware of the current questions in this sort of research. The good pathologist, who thus keeps one eye open to biology, may even find himself sitting on a good model system for his colleagues in research.

H. E. M. KAY

Laboratory Correlation Manual By Alvin M. Ring (Pp. xiv + 142. $8·50). Springfield, Illinois: Charles C. Thomas. 1969.

This short manual sets out to provide a ready reference book for laboratory tests for the busy doctor. In itself it is quite useful, but is perhaps a little more elementary than the laboratory handbooks which are produced in Britain. The inclusion of surgical pathology and post mortem evaluation is fairly meaningless.

A. G. SIGNY