Diseases of the Fundus Oculi. By Arnold Sorsby. (Pp. viii + 221; illustrated. £15·00.) London: Butterworth. 1976.

Ever since the ophthalmoscope was introduced in 1850, the appearance of the fundus oculi has fascinated not only ophthalmologists, but also physicians and surgeons. Numerous textbooks and atlases have been published in the 125 years that have elapsed since Helmholtz first examined the fundus in a living subject, and this recent publication is an interesting addition to the already large literature on the subject. At a time when fluorescein angiography dominates the examination of the fundus, a book that hardly mentions this valuable technique is certainly unusual, and indicates the particular interests of the author, a pioneer in the subject of ophthalmic genetics, and an acknowledged authority on medical ophthalmology.

In this book the author describes the fundus appearances in many developmental anomalies and acquired affections, as well as in conditions primarily involving the optic nerve. It is inevitable that the reviewer should study carefully the section on developmental anomalies, an area in which the author has made significant contributions. There is an enormous amount of information in the 100 pages of this section, much of which has been previously published, but now collected together under one cover. This is not a section for the novice, for much of it demonstrates the idiosyncracies of the author and requires background knowledge in order to separate current thought from the author's views. Several examples of this will be given. The use of the term 'retinal aplasia' is confusing, being applied both to a condition (or group of conditions) where babies are born blind with ophthalmoscopically normal fundi, and who eventually develop changes of typical or atypical retinitis pigmentosa (R.P.), and also to a heterogeneous group of systemic abnormalities associated with 'atypical R.P.'. The section on 'congenital total detachment' is confused, lumping together conditions that are known to be different, such as Norrie's disease (the widely accepted name, despite what Sorsby says), Reese's retinal dysplasia, and Coats' disease. The section on R.P. is out of date and takes no account of work that has been published over the past few years. The emphasis on the importance of the tapetal reflex in heterozygous females with X-linked R.P. is unfortunate; this is an unhelpful sign of the heterozygous state. Doyne's choroiditis is an interesting historical name, but dominant drusen is the better term. The classification of the mucopolysaccharidoses is several years out of date. The emphasis on the difference between recessive and intermediate X-linked inheritance is probably not now justified.

These, and other aspects of the book, would have been acceptable in a book published 10 or 15 years ago, but not today. This remains, however, an interesting book, highlighting the particular interests of the author who has done so much to develop the subject of ophthalmic genetics.

BARRIE JAY

Control of Gene Expression. By N. Maclean. (Pp. xi + 288; 21 figures + 6 tables. £7·80; $19.75.) London, New York, San Francisco: Academic Press. 1976.

Although there is some information about how the control of gene expression is accomplished in prokaryotic systems, very little is known about this process in higher organisms. The problem of genetic control mechanisms has a direct application to medical genetics because it seems likely that many inherited disorders result from mutations of genes involved in regulation of protein synthesis. The only clues that we have regarding gene regulation in man and higher organisms are fragmentary and, as the author of this book points out, are derived from so many different fields that it is hard for the worker in any particular area to keep abreast with the total output of knowledge in this important subject. As an approach to this problem Dr Maclean has attempted to review the experimental systems currently being used to investigate gene regulation in a very wide field of disciplines. Clearly this is no mean task.

The first chapter deals with the possible mechanisms of gene expression at various levels of differentiation from transcription through to translation and the final assembly of proteins within cells. There follows a brief account of the control of gene expression in prokaryots and then a more detailed section dealing with different experimental systems involving single proteins which are being used to study gene action in higher organisms. The latter include the immunoglobulins, lactic dehydrogenase, haemoglobin, lens crystallins, milk proteins, and so on. The next section deals with the control of more complex systems such as yeast and muscle and then describes some of the lessons which have been learned from the recently-developed techniques of nuclear transplantation and microinjection. Further sections deal with some problems of embryology, and control models in various protozoa, hydra, and *Drosophilia*. These are followed by a general account of the involvement of different forms of RNA in gene expression. There is a final section on chromo-