
This third volume of the *Atlas*, which deals with the cornea and sclera, not only maintains the high quality of the preceding volumes but surpasses them. The illustrations are, on the whole, excellent; a few are fabulous!

As an aid to teaching these volumes cannot be too highly recommended.


The beautiful stereographs of this Atlas demonstrate a wide range of eye conditions in domestic animals, and the text provides a concise account of these conditions, with case histories, illustrated in black and white. The volume should be most helpful to the veterinary surgeon, and a handy reference book for the ophthalmologist who may occasionally be asked to advise on eye conditions in domestic animals.


To many ophthalmologists it must appear that the most practical outcome of biochemical investigations of the lens would be the development of some form of treatment that arrested the formation of opacities and thereby reduced the need for cataract surgery. The author of this book makes it clear that biochemists have other ideas and see wider possibilities.

From the biochemist's point of view the lens is a useful organ for the study of metabolic processes because the latter are not complicated by the presence of a nervous or direct blood supply. Furthermore, the remarkable way in which the lens grows provides the opportunity to answer some general biochemical questions, because within the lens there are cells which have the same origin but are in different stages of activity.

In the anterior epithelium of the lens, cellular activity is relatively low centrally but increases progressively towards the equator where active mitotic growth is found. The cells arising therefrom grow further and elongate to form the lens fibres, this growth being accompanied by shrinkage of the nuclei. The author points out that, by working with homogenates from various regions of the lens, one can discover whether there are any enzymatic changes which correlate with the varying degrees of cellular activity and one may hope to find out which enzymes are responsible for stimulating and inhibiting cellular growth. Such work could have an obvious bearing upon the growth of benign or malignant neoplasia. The author also deals with the further possibilities of producing antibodies to specific enzymes with the aim of influencing cellular division and growth.

The first few pages deal briefly with the phylology, ontogeny, embryology, structure, chemical composition, and metabolism of the lens, with the emphasis on points which are relevant to the main theme of the book. The next section deals in detail with some of the enzymes present in the lens and this is followed by an account of the alterations in enzymatic activity which have been shown to be dependent upon the stage of growth, differentiation, and age of the cells of the lens. The enzymes showing the most marked correlation with mitosis and with synthetic processes were lactic dehydrogenase, glucose-6-phosphate dehydrogenase, and leucinaminopeptidase. Methods of isolating and purifying the enzymes are then described, and lastly there is an account of the immunological work, which was complicated, as might be expected, by problems such as those arising from organ-specificity and species-specificity of lens proteins.

Much of the book is based upon the large amount of experimental work undertaken by the author and in some sections a considerable amount of technical detail is given. The results are discussed in relation to the findings of other workers, and in this connection there is a useful list of 254 references.