

EXCITABILITY OF THE HEART

By CHANDLER McC.BROOKS, Ph.D., BRIAN F. HOFFMAN, M.D., E. E. SUCKLING, M.Sc., M.E.E. and OSCAR ORIAS, M.D. Pp. xiv + 373, with 86 diagrams. New York and London: Grune and Stratton Inc. 1955. \$6.50.

Progress in research depends as much upon accurate measurement as it does upon keen observation and the evolution of hypotheses to explain natural phenomena. Using the instruments of modern biophysics, it has been possible to assess more accurately some of the physiological phenomena associated with the contraction of heart muscle. These more accurate measurements have yielded new information which promises to make a valuable contribution to our understanding of the excitability of heart muscle in the healthy and in the pathological state. The authors have described their experimental methods and their results, which are discussed in relation to those of other workers and in relation to current hypotheses concerning the mechanism of muscle contraction. The effects of changing temperature on the function of various organs are very important in modern surgery. The chapter devoted to the effects of heating and cooling on the physiology of heart muscle should therefore be of interest to the surgeon. The fundamental changes which occur in fibrillation of both the auricle and the ventricle have also been investigated, and the mechanism of action of anti-fibrillatory drugs and procedures is discussed. The book is directed at post-graduate students and all those who have any physiological or clinical interest in the excitability of heart muscle. There is a useful summary at the end of each chapter and a very full bibliography which makes the book an asset in any physiological research or teaching department.

P.A.N.

CIBA FOUNDATION SYMPOSIUM JOINTLY WITH THE PHYSIOLOGICAL SOCIETY AND THE BRITISH PHARMACOLOGICAL SOCIETY ON HISTAMINE

Edited by G. E. WOLSTENHOLME, O.B.E., M.A., M.B., B.Ch. and CECILIA M. O'CONNOR, B.Sc. Pp. xvi + 472, with 133 illustrations. London: J. & A. Churchill Ltd. 1956. 50s.

The book contains the papers read to the Physiological and Pharmacological Societies at the Wellcome Foundation, and also both papers and discussion of a smaller group at the Ciba Foundation in 1955.

Part I of the main meeting is concerned with the occurrence of histamine in the body. The distribution in various tissues, particularly in mast cells, and the form in which histamine occurs is considered in detail. Part II is especially on the mechanism and the types of compounds causing release of histamine: the effect of anaphylaxis is considered here. Part III is on the origin and significance of histamine in the body. The origin and fate; the effect on gastric secretion and blood

vessels; the relation of histamine to nerves, is considered together with skin histamine and histaminare.

The second half of the symposium, at the Ciba Foundation, covers much the same field, but certain aspects, especially biochemical, are considered in more detail.

There is a wealth of detail and a good bibliography, most of the contributors being pre-eminent in their field. In addition to data there is reasoned speculation. It is striking, however, that with the exception of the probable roles of histamine in gastric secretion and anaphylaxis the physiology of histamine (as opposed to its pharmacology and biochemistry) remains virtually unknown.

This collection of papers makes a valuable and useful contribution to the literature on histamine.

W.H.H.A.

MODERN TREATMENT YEAR BOOK, 1957

Edited by SIR CECIL WAKELEY BT., K.B.E., C.B., LL.D., M.Ch., D.Sc., F.R.C.S., F.R.S.E., F.R.S.A., F.A.C.S., F.R.A.C.S. Pp. viii + 312, illustrated. London: Baillière, Tindall & Cox Ltd. 25s.

The high standard of previous editions is well maintained in this yearbook of diagnosis and treatment for the general practitioner. It contains 32 articles ranging over all branches of medicine and surgery, most of which are very clearly written and informative. Three chapters seem worthy of special mention. There is an excellent account of the diagnosis and management of leprosy, a disease likely to become more common in this country, a well-illustrated description of disorders of the nails cannot fail to interest all readers and the advice on the care of a colostomy will be found of great practical value.

H.L.B.

CIBA FOUNDATION SYMPOSIUM ON CHEMISTRY AND BIOLOGY OF PURINES

Edited by G. E. W. WOLSTENHOLME, O.B.E., M.A., M.B., B.Ch., and CECILIA M. O'CONNOR, B.Sc. Pp. xii + 327, illustrated. London: J. & A. Churchill Ltd. 1957. 48s.

At the Ciba Foundation Symposium on the Chemistry and Biology of Pteridines in 1955 the need for a future conference on purines was generally felt and was finally proposed by G. M. Timmis. A complete record of this symposium on purines, which was held in London in May 1956, is to be found in this book. Its publication within a year of the event is a fine achievement and makes available an up-to-date account of a subject of considerable importance to medicine. Under the benign chairmanship of Professor Adrian Albert some 22 communications were read by workers of many nationalities.

ties to a limited audience selected for their international repute in this field. The communications were followed by informative discussions which are included in detail.

Since the 1940s there has been a great revival of interest in the purines which had declined since the early work of Emil Fischer some 50 years ago. During 1956 this revival has culminated in the firm establishment of the biosynthesis of purines, so that the date of the symposium was most opportune.

Alongside the remarkable advances in purine synthesis, which will undoubtedly be of great future importance in the study of virus diseases and the problem of cancer, are accounts of more direct medical interest on the purine analogues of vitamin B₁₂, the trypanocidal and anti-tumour activity of puromycin, and the effects of 6-mercaptapurine and its use in the treatment of leukaemia. Although this book will undoubtedly appeal mostly to chemists and biochemists, there is much in its contents which will be of interest to pharmacologists and those concerned with the academic subjects of medicine.

D.V.P.

MODERN OPERATIVE SURGERY

Volume II

Edited by the late G. GREY TURNER, LL.D., D.Ch., M.S., F.R.C.S., F.R.C.S.E., F.R.A.C.S., F.A.C.S., and LAMBERT CHARLES ROGERS, V.R.D., M.D., M.Sc., F.R.C.S., F.R.C.S.E., F.R.A.C.S., F.A.C.S. 4th edition. Pp. xii + 1383, with 1090 illustrations. London: Cassell & Co. Ltd. 1956. 75s.

Volume II completes this survey of the 'whole range of modern surgical operations' and therefore includes chapters on E.N.T., ophthalmological and gynaecological operations. The object has been fully achieved and certainly all the common operations as performed in this country are described. This is done in a clear, logical and therefore interesting way by 'building up' the descriptions of the operative procedures from general principles derived from the anatomy, physiology and pathology of the part under consideration, before describing the actual techniques. 'Modern Operative Surgery' has always been a popular textbook and these two volumes maintain this excellent tradition.

It is difficult to select particular sections for praise as the standard is uniformly high and criticisms are few and only of details. The chapter on herniae is full of the basic principles and sound advice which one expects from the late Grey Turner. The drawings of the rectum and anal canal are particularly clear and useful. The transfrontal approach is rightly given pride of place over the transsphenoidal route for hypophysectomy, but its use in the treatment of advanced malignant disease might have been expanded on. Many will disagree with the

view expressed that Hashimoto's and Riedel's diseases of the thyroid are variations of the same process, as the evidence against this view is rather strong. One was pleased to see the anterior approach for cervical sympathectomy emphatically recommended and the modern theory for failures or relapses strongly given.

Grey Turner's 'Modern Operative Surgery' remains a standard textbook for many postgraduate students and practising surgeons.

G.J.

CHEMOSURGERY IN CANCER, GANGRENE AND INFECTIONS

By F. E. MOHS, B.Sc., M.D. Pp. xvii + 305, with 225 illustrations. Oxford: Blackwell Scientific Publications Ltd. 1956. £5 2s. 6d.

Chemosurgery is the removal of tissue, such as malignant, gangrenous or infected tissue, after it has been fixed by chemical means. In the treatment of external cancer, the purpose of chemical fixation *in situ* is to facilitate the systematic microscopical control of excision through the use of frozen sections.

The fixative chemical used is zinc chloride in a 'permeant' base of stibnite and an 'agglutinant' obtained from plant extracts. This is called Z-108a by the author, who is Professor of Chemosurgery in Wisconsin, U.S.A.

The technique consists in excising the carcinoma surgically in a very limited way, and then applying the fixative paste for a length of time dependent upon the depth of penetration required; this fixed tissue is then excised and frozen sections of the under surface of this are then examined; further applications of the paste followed by further excision are continued until the excision is microscopically clear of growth. By limiting the application of the fixative to the cancerous areas, selective destruction of the neoplasm is possible, thus allowing greater conservatism than in more orthodox methods of treatment. The local lymph nodes are removed surgically, if they are thought to contain growth. The treatment may take eight hours and is performed under local anaesthesia.

The indication is mostly for skin carcinomata, squamous-cell or basal-cell, and five-year cure rates of over 84 per cent. and 98 per cent. respectively are claimed, but the calculation of these figures is not altogether clear. The main advantage of the method lies in its conservatism, but the results are probably no better than those from the more normal methods, which are less time-consuming.

The author also advocates chemosurgery in the treatment of benign and pre-cancerous lesions, for certain inflammatory processes and for gangrene.

Those engaged in the treatment of cancer will be interested to read this very well-presented book.

G.J.



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