quent gratitude for its relief. I particularly liked C. E. Dalglish's exposition of certain biochemical lesions and Sir George Pickering's stimulating account of recent work on pyrogens and fever: but all these lectures are authoritative discussions of their subjects. The first and last lectures are unlike the rest in that they are not concerned with some one field of research. The book begins with a lecture by Sir Lindor Brown on 'Physiology, medicine, and the basic sciences' and ends with Sir Roy Cameron's lecture on 'The adventure of research'. Both are delightful pieces of writing and if, as Sir James Paterson Ross says in the preface, one of the objects of the new style of presentation is to interest a wider audience, these two memorable contributions should go a long way to help.

F. HAMPSON

BILE PIGMENTS IN HEALTH AND DISEASE. By C. H. Gray. (Pp. x + 101; 18 figures. 40s.) Oxford: Blackwell Scientific Publications. 1961.

This slim volume gives in a brief and easily comprehensible manner, the current state of the knowledge of bile pigment metabolism in relation to human pathology. In the first chapter there is an introduction to the chemical structure, nomenclature, and reactions of the bile pigments. This is followed in chapter 2 by a summary of the chemistry of haemoglobin breakdown. The bulk of the book is concerned with an historical presentation of recent work on the biosynthesis of the bile pigments, and on the separation of the conjugated and unconjugated bilirubin pigments in the blood, with the consequent elucidation of the nature of the Van den Bergh reactions. The last chapters give brief, but clear, discussions of the methods of estimation of bile pigments in blood and urine, and the findings in patients with jaundice. The exciting advances in this field are described with a clarity and economy of language which makes the book very readable. The general production of the book is good, and the printing, figures, and diagrams clear. There is also a good index.

This book is not intended for an expert in this field of chemistry, but will prove of great interest and value to those who have a general interest in bile pigment metabolism.

M. G. RINSLER

MODERN TRENDS IN UROLOGY, 2nd series Edited by Sir Eric Riches. (Pp. xvi + 287 + Index; 286 figures. 70s.) London: Butterworth. 1960.

Urology is certainly a progressive speciality. When the first series of 'Modern Trends in Urology' was published a few years ago the subjects with which it dealt were predominantly such as would be of interest to a urological surgeon only. In the second series which has just been published both general medicine and pathology have a larger place and clinical pathologists will note with special interest the chapters on renal biopsy, tumours of the renal pelvis and ureter, tumours of the adrenal gland, and new growths of the testis. Moreover, pathology, and biochemistry have successfully infiltrated into many of the other chapters though written by clinicians or surgeons.

This second series, like the first, has been edited by Sir Eric Riches, who, though himself an eminent and skilful urological surgeon, has always welcomed and encouraged pathologists and biochemists to 'make themselves at home' in urology.

CUTHBERT DUKES

PATHOGENESIS AND TREATMENT OF CEREBROVASCULAR DISEASE Edited by William S. Fields. (Pp. xii + 562; illustrated. 120s.) Springfield, Illinois: Charles C. Thomas; Oxford: Blackwell Scientific Publications. 1961.

This elegantly produced volume records the papers and discussions at the Seventh Annual Scientific Meeting of the Houston Neurological Society held in March 1959 at the Texas Medical Centres.

Chapters of some interest to pathologists are those on Embryology and Anatomy (H. A. Kaplan), The Natural History of Atherosclerosis (R. L. Holman and J. Moossey), Pathology of Intracerebral Haemorrhage (C. M. Fisher), Cerebral Aneurysms (D. E. Smith and R. B. Windsor), and Subarachnoid Haemorrhage (O. T. Bailey). In addition there are surveys of biochemical aspects (A. C. Griffin) and of problems of thrombosis and blood coagulation (C. A. Owens, Jr. and J. H. Thompson, Jr.). The last of these begins with a statement that will cause many eyebrows to rise: 'A thrombus by definition is a clot'!

On the whole these pathological chapters are not pitched at a high level. They are clearly intended as a mere introduction to the clinical matters that follow, and, regrettably, much of their content is already out of date. It seems unlikely that many will consider the volume worth the very high price quoted.

T. CRAWFORD

THE ADRENAL CORTEX Edited by G. K. McGowan and M. Sandler. (Pp. xii + 226; illustrated. 25s.) London: Pitman Medical Publishing Co. 1961.

This work is well described on the title page as chemical pathology in relation to clinical medicine. It is the proceedings of a symposium organized by the Association of Clinical Pathologists. It is worthy of publication because it gives a good view of the adrenal cortex in relation to clinical medicine. Naturally, the picture is not complete, but no symposium can ever cover all the ground and the decision as to what to include and what to leave out is not an easy one. The Chairman, Professor C. H. Gray, and the two Organizing Secretaries, who also edited the publication, are to be congratulated on their choice of material. The work will make valuable reading both for the pathologist and for the physician. As the Chairman says in his preface, it was intended to provide an up-to-date account of the chemical pathology of the adrenal cortex rather than a forum for discussion between experts in the field. The first papers are described as chemical pathology and deal with the structure of the gland in relation to hormone production, the chemistry and physiology of the hormones produced by the gland, and various aspects of the determination of the hormones and their metabolites in urine. This is followed by a

section on clinical applications dealing with adrenocortical hyperfunction and hypofunction in adults, adrenocortical disorders in children, aldosteronism, and the complications of corticosteroid therapy. All the papers are good: particular mention should be made of those of T. Symington and R. H. W. Edwards in the section on chemical pathology, and those of J. D. N. Nabarro, M. D. Milne, and R. I. S. Bayliss in the section on clinical applications.

It is to be hoped that this symposium will be the forerunner of many more; there is a great and increasing need for chemical pathology and clinical medicine to come closer to one another, and it will not be accomplished by the physician ignoring the chemistry of the phenomena he observes nor by the chemist ceasing to be a physician.

ARTHUR JORDAN

FUNCTIONS OF THE BLOOD. Edited by R. G. Macfarlane and A. H. T. Robb-Smith. (Pp. liv + 635; illustrated. 120s. Oxford: Blackwell Scientific Publications.

The aim of this book is to present a 'unifying approach to the study of blood, concentrating on its function'. In order to achieve this objective, the editors have called upon a panel of distinguished scientists, each an expert in his own chosen field, to contribute to the book. Despite the multiple authorship, the text is pleasantly easy to read and without undue conflict of styles. The illustrations are uniformly good and the whole publication is of a very high standard which is reflected in the price.

The necessity for such a book as this, which seeks not only to increase our understanding but also to restore

biological perspective, is symptomatic of our times. It reflects the enormous growth of knowledge in the field of disorders of the blood, the fragmentation of haematology into numerous sub-specialities, the confusing nomenclature, and the increasingly complex technology.

The editors of any book which attempts such an ambitious role must exercise some degree of selection of the subject matter, for it is manifestly impossible to cover all aspects. The coverage in this book is wide and few will quarrel with the choice of subjects. The list of chapters includes, among others, an historical review, the evolution of the human red cell, the morphology of blood cells, the maintenance of the cell populations in the peripheral blood, blood cell metabolism, blood cell antigens, reaction of the blood to injury, and the maintenance of iso-osmolarity.

The approach to each subject is functional and teleological, although morphology is not neglected, but structural changes are used mainly to explain dynamic processes. The views on many haematological problems are those which are commonly accepted on the basis of the available evidence, but where knowledge is incomplete this is clearly indicated. Each chapter is provided with an excellent and up-to-date bibliography.

Those who are interested in the blood and its disorders, either as clinicians, laboratory workers, or students, will delve deeply into this book. They will be both enlightened and refreshed. Few books published in this field in recent years have been as stimulating, instructive and philosophical as 'Functions of the Blood'.

M. G. NELSON