BOOK REVIEWS

Laboratory Aids in Endocrine Diagnosis. By Roberto F. Escamilla. (Pp. xii+131; 21 plates. 34s.) Oxford: Blackwell Scientific Publications. 1954.

This little book, which is almost encyclopaedic in scope, contains lists of laboratory tests applicable to the presently acknowledged endocrinopathies. Laboratory tests are given a wide application, including electrocardiograms, radiographs, the metabolic rate as well as those more strictly allied to clinical and chemical pathology. The final chapter, instead of the customary index, contains a recapitulation of the laboratory data collected under the headings of the various endocrine diseases.

Only the methods of the more complicated tests are given. These include, for example, two methods for blood glucose, vaginal smear techniques, and urine pregnancy tests. Although cancer diagnosis by vaginal smears grew out of work on endocrine studies it seems out of place in this sort of book to include a large colour plate (Fig. 11) depicting cervical cell pathology. It is interesting to find the Hogben pregnancy test relegated to the place of an "also ran," being displaced by male frog or toad tests. The chapter on testicular biopsy is well up to present-day teaching, but the few photomicrographs are technically ill chosen.

The book might be found useful for reference, but the author insists that laboratory aids do not replace an adequate clinical appraisal of a patient. Few would agree to repose confidence in one specially trained technician in interpreting results of some of the more complicated tests for clinical use.

M. HAINES.

Experimental Diabetes and its Relation to the Clinical Disease. A Symposium organized by the Council for International Organizations of Medical Sciences established under the joint auspices of U.N.E.S.C.O. and W.H.O. (Pp. ix+352. 35s.) Oxford: Blackwell Scientific Publications. 1954.

It is still a matter of some surprise to some observers that the problem of human diabetes was not more or less finally solved by the studies which began with the demonstration by v. Herring and Minkowski that pancreatectomy was followed by diabetes and which culminated in the successful isolation in 1922 of insulin by Banting and Best. Indeed, the spate of work which followed this last discovery has presented far more problems than it has solved. The role of the pituitary and adrenal hormones is no nearer being understood. Even the important discovery of the diabetogenic action of alloxan has done nothing to tell us the cause of human diabetes, which remains as elusive as it was before the first experimental pancreatectomy. The literature in this field is so vast that any account attempting to bring together within a reasonable compass our knowledge of the subject is especially welcome.

In 1952 the Council for International Organizations of Medical Sciences sponsored a symposium on experi-

mental diabetes and its relation to the clinical disease. The book *Experimental Diabetes* which records the papers presented at that symposium, together with the numerous discussions these papers provoked, provides a compendium invaluable to the biochemist, physiologist, or clinician who is concerned with diabetes. An excellent account by Best of recent work on the islets of Langerhans is followed by two papers by de Duve and by Candela on glucagon. The possible mechanism of the diabetogenic action of alloxan in the experimental animals receives particular attention, but the view that alloxan or uric acid may fulfil a physiological function in carbohydrate metabolism or be of importance in the causation of human disease is unconvincing. Two papers are concerned with the effects of adrenal steroids in carbohydrate metabolism; growth hormone and its relation to general metabolism, to diabetes, and to insulin also receive consideration. There are also contributions on the action of insulin as well as on its absorption, as well as papers discussing diabetes and heredity, diabetes and pregnancy, and the various clinical forms of the disease.

This book, which is astonishingly readable despite the large mass of factual information, is a praiseworthy attempt to bring together the views of clinicians and scientists, and may well stimulate a closer collaboration between these two groups of workers.

C. H. GRAY.

Porphyrins. Their Biological and Chemical Importance. By A. Vannotti; translated by C. Rimington. (Pp. 258; 15 plates. 50s.) London: Hilger and Watts. 1954.

Professor Vannotti's monograph "Porphyrine und Porphyrinrankheiten" was published in 1937. Its value is indicated by the fact that so eminent an authority as Professor Rimington should have felt it desirable himself to translate it and thereby make it more readily available to English-speaking readers. This is not a translation solely of the 1937 monograph, as Professor Vannotti has specially made considerable additions to cover advances since that time. The recent literature is, however, less well covered. The manuscript was finished some time ago, but publication was unfortunately delayed. The considerable recent advances in our knowledge of porphobilinogen and porphyrin biosynthesis are thus not adequately covered.

The section on the chemistry of the porphyrins is principally confined to a statement of structures. Spectroscopic characteristics are well summarized with useful plates, and this is followed by a chapter on extraction and determination. The classical methods are well reviewed, but the paper-chromatographic and electrophoretic techniques now yielding most useful results in this field receive scant mention. The occurrence of porphyrins in nature is then considered.

The greater part of the book consists of a review of porphyrin metabolism in man in normal and pathological

states. The various porphyrias are well surveyed, with chapters on possible modes of treatment and on the pharmacological effects of porphyrins. The approach is often personal and considerable illustrative use is made of cases which have come under Professor Vannotti's own observation.

The weakness of the work lies in its arrangement. The new material covering recent work has been added, usually at the end of chapters, without integrating it with existing material. It is thus possible to find outmoded theories in one part of a chapter and more recent work refuting it later on with no cross-reference (e.g., Fischer's theory that the more carboxylated porphyrins are detoxication products is stated without qualification on p. 7 and refuted in a brief discussion of recent isotopic work only on p. 31). It is thus unwise to make use of isolated sections; chapters must be considered as a whole. A few footnotes by the translator help, but they are not adequate to replace the desirable greater integration of the text or, if this were impracticable, at least more adequate cross-references.

The translator has been careful not to superimpose his own views and has provided a most faithful translation. It is perhaps excessively loyal to the original to maintain some of the Continental usages, such as lactoflavin for riboflavin.

One of the most valuable features of the book is the extensive bibliography. One of the weaker features is the somewhat inadequate index. But the work as a whole remains a most valuable prime source for those interested in porphyrin metabolism.

C. E. DALGLIESH.

The Distribution in Human Blood Groups. By A. E. Mourant; with Foreword by H. J. Fleure. (Pp. xxi+438, 42s.) Oxford: Blackwell Scientific Publications, 1954.

It is less than 40 years since the Hirszfels discovered that the frequency of ABO blood groups varied in different nations. This discovery started off an enormous amount of work on the distribution, first of the ABO blood groups, but soon also on that of the MN groups and later still particularly that of the Rhesus blood groups.

This book is the first which is a completely comprehensive survey of the data widely scattered in the literature. It complements the work on the genetics of the human blood groups, *Blood Groups in Man* by Race and Sanger, which has recently appeared in its second edition. Nevertheless there is a succinct and useful survey of blood group inheritance and it is elaborated to show the anthropological significance of the different blood group systems: ABO, Rhesus, MNS, Lewis, P, Lutheran, Kell, Duffy, Kidd. Other simple genetical systems such as the sickle cell trait or the ability to taste phenylthiocarbamide are rightly promoted to "honorary blood groups" and are fully discussed. Detailed surveys of geographical distribution are dealt with in separate chapters: northern and central Europe, Africa south of the Sahara, the Mediterranean area, Asia, Indonesia, Australasia,

and America. There are chapters on hybrid and migrant populations, on the blood grouping of animals, and of bones and tissues ("blood group archaeology"). All this amounts only to the first half of the book and is summarized in a brilliant chapter, "Attempt at a Synthesis," which is headed appropriately by a quotation from Walter de la Mare:

"Strange prodigy is man. Of so short stay,
Yet linked with Vega and with Nineveh.
Time—space: what matters it how far away,
In this strange hall of mirrors through which
we stray?"

Recently evidence has been forthcoming that simple genetical characters such as the ABO groups or the sickle cell trait may have a selective value protecting against some diseases and causing others. As the balance between advantages and disadvantages will depend on surroundings we may obtain here a new insight in the formation of the human races. It is of particular interest that the distribution of some blood group systems such as Rhesus and MNS is fairly uniform over whole continents, whereas the ABO blood groups show wide variations within comparatively small areas.

The second half of the book contains chapters on laboratory procedures and calculation of gene frequencies. A detailed bibliography of some 1,700 references is then presented which alone will make this book an outstanding work of reference. There follow maps of the world and of Europe showing the distribution of various blood group genes on the principle of isobars. This manner of presentation is quite new and produces fascinating surveys at a glance. This is followed by 26 blood group frequency tables and an exhaustive list of the frequencies of the sickle cell trait. At the end there are three indices, one topographical, one zoological to the bibliography, and one general to the text.

This scholarly work will be a useful guide for all pathologists to a special aspect of blood group serology—at present not yet of practical importance but already intriguing and theoretically fundamental. It will be an indispensable work of reference to those who are specialists in the field.

H. LEHMANN.

The Laboratory Diagnosis of Leptospirosis. By J. W. Wolff. (Pp. xiv+98; 5 illustrations. 27s. 6d.) Springfield, Ill., U.S.A. Charles C. Thomas, Oxford; England: Blackwell Scientific Publications, Ltd. 1954.

The methods, for diagnosing leptospiral infection by laboratory means, which are described in this book have been used for the very extensive work which has been done in Amsterdam during the last quarter of a century. During all this time Dr. Wolff has been one of the leaders in applying them to leptospiral diseases in Indonesia and in the Netherlands. The separate aspects of the practical work are clearly laid out in full detail: microscopical demonstration of leptospirae in dark-ground preparations, in stained films and stained sections; culture, animal inoculation, and serological tests. The