

PROTIDES OF THE BIOLOGICAL FLUIDS Proceedings of the ninth Colloquium, Bruges, 1961. Edited by H. Peeters. (Pp. x + 373 including index of authors and of subjects; 247 figures; 60 tables. Dfl. 45.-.) Amsterdam: Elsevier. 1962.

This volume contains the text of four plenary lectures, the discussions of a round table conference, and 64 other contributions of varying length and value, of which about half are in English and the remainder are in either French or German. The various articles are classified in sections: Analytical Methods, Protein Structure, Protein Turnover and Metabolism, Carrier Function of Proteins, Proteins and Genetics, Isolated Fractions. From the standpoint of the practising clinical pathologist, the interest of the individual items varies greatly. On the one hand are papers likely to be of interest only to workers in a particular field; on the other hand a few of the contributions review work of considerable general interest.

Published proceedings of congresses, colloquia, and meetings of different kinds are becoming ever more numerous amongst medical publications: the value of publishing the proceedings of such meetings is in some cases very doubtful. When the contributions give an up-to-date survey of knowledge in a particular field, there is a good deal to be said for publication as rapidly and as cheaply as possible. Original work would be better published in appropriate journals. Most original work will, in any case, be published elsewhere and there seems little point in publishing the same matter twice. Furthermore work published in a scientific journal is accepted by the editor on its merits: the proceedings of a meeting include everything, good and bad alike.

This volume is attractive and well produced but there seems insufficient justification for its appearance.

ARTHUR JORDAN

ENTEROBACTERIACEAE-INFEKTIONEN Edited by J. Sedlak and H. Rische. (Pp. xxiv + 480. DM 53.10.) Leipzig: Georg Thieme. 1961.

The post-war years have been marked by signal advances in the study of the *Enterobacteriaceae*. Methods of isolation and identification have been improved, the ecology of the group has been greatly clarified, and its classification more clearly defined. The rapid development of phage typing has advanced the epidemiological study of infections caused by many members of the group. Studies of recombination and phage-mediated transduction have shed much light on the genetic make-up of these organisms. Finally, the detailed analysis of the antigenic polysaccharides has brought chemical evidence for the validity of serological classification.

Such has been the pace of this progress that a great deal of valuable information has accumulated which is inaccessible to the average worker because of its very volume. It is pleasant, therefore, to find a group of authors sufficiently energetic to summarize much of the published material in this field. The result is a book of manageable size in which the *Enterobacteriaceae* are reviewed from most of the aspects mentioned above and adequate (perhaps occasionally too much) attention is paid to documentation.

The book opens with a general chapter on the *Enterobacteriaceae*, in which the classification, biochemical properties, antigenic structures, variability, and pathogenicity of the group are reviewed. Among the introductory chapters is one dealing with the diagnosis of infections with members of the group. Methods of specimen collection and dispatch are outlined here, and the various selective, enrichment, and differential media named and their merits discussed. A diagnostic table is presented of the different 'genera' of *Enterobacteriaceae*, as defined by their biochemical reactions. The principles of the Widal test are described as is also the use of specific antisera in the diagnosis of serotypes.

As might be expected, one of the larger chapters is devoted to the *Salmonellae*, and the microbiology, diagnostic bacteriology, epidemiology, and preventive medicine of these organisms are minutely described. The enteric fevers are considered within this chapter, although many workers would be of the opinion that they merited a chapter to themselves. In the description of salmonella food poisoning, a comparison of the incidence of serotypes in a number of countries is given, in which a somewhat out-of-date picture is presented of the incidence and frequency distribution of serotypes in the United Kingdom, because pre-war figures are used which antedate the meticulous attention now devoted to these infections in this country. Much later figures are available and should have been used. (There is a misprint in the text at this point, the English figures being erroneously quoted as covering the period 1933-1938 instead of 1923-1928.) Nevertheless, the early figures, small though they are by modern standards, show the predominance of *S. typhimurium* in salmonella food poisoning, a position it has maintained to the present day.

The relative importance of various foods and of rodents and other animals as sources of salmonellosis is considered. A useful section of this chapter is devoted to the prophylaxis of salmonellosis. Attention is drawn to the greater sensitivity of young children and the aged to salmonella infections. It is stated that the clinical picture and outcome in very young children are independent of the infecting serotype, that is, that there is a high and equal sensitivity to all serotypes in this age group.

The foregoing example will indicate the detail entered into in the exposition of the various subdivisions of the *Enterobacteriaceae*. Although it is obvious that the greatest amount of information must be presented on those groups that have long established their importance, such as *Salmonella* and *Shigella*, the authors have fully explored the literature in the treatment of groups whose rightful position, taxonomically and ecologically, is still being debated. Thus, *Arizona*, *Citrobacter*, *Escherichia*, *Klebsiella*, *Cloaca*, and others are scrutinized as closely as the work up to about 1959 will permit.

The development of the phage-typing method during recent years has made possible important advances in the epidemiological study of the *Enterobacteriaceae*. The first effective scheme was that for the typing of *S. typhi* by Vi-phages, introduced by Craigie and Yen in 1938. Felix recognized the epidemiological importance of this scheme and was largely responsible for its international adoption. He also, in association with Miss B. R. Callow,

endeavoured to devise similar schemes for *S. paratyphi B* and *S. typhimurium*. As these three serotypes between them account for most salmonellosis (assuming that it is permissible to regard the enteric fevers as salmonelloses) efficient phage-typing schemes for all of them offer opportunities of solving epidemiological problems that may otherwise be impossible even to define. Experience during the past 20 years has broadly justified the early hopes placed in the phage-typing method and schemes have been developed for other salmonellas, for some shigellas, for strains of *E. coli* causing infantile enteritis, and for *Proteus hauseri*.

The chapter on phage typing is large and its author describes in great detail the Vi-phage typing method for *S. typhi*. Certain Vi-phage types of the typhoid bacillus (particularly types A and El) are so common in many regions as to reduce the epidemiological value of their recognition, and the author discusses ancillary schemes that have been developed for the subdivision of these types. Stress is laid on the advantages of international cooperation in this field and a table is given of the order of frequency of the commonest Vi-phage types in many countries.

The phage typing of *S. paratyphi B* is examined in similar detail and a somewhat briefer description is given of schemes for the phage typing of the other Enterobacteriaceae mentioned above.

The final chapter gives practical details of the preparation of the numerous media employed in the recognition and differentiation of various groups of the Enterobacteriaceae. It ends with a brief description of the preparation of diagnostic antigens and sera.

This book fills many needs. It supplies clinical, public health, and veterinary bacteriologists with much practical information on the isolation and identification of Enterobacteriaceae and, because it discusses in detail almost every aspect of 'enterobacteriology', is equally useful to the clinician, the epidemiologist, and the research worker. Because of the volume of its documentation it is a valuable source of reference. It is naturally inevitable to find lacunae in a book of such wide scope, but these are relatively few, and the reviewer hopes that they will be filled in a later edition. The index could also be expanded with advantage. In general, however, the authors are to be congratulated on their comprehensive treatment of their subjects.

E. S. ANDERSON

WHOLE-BODY COUNTING A Symposium. (Pp. 535; illustrated. 60s.) Vienna: International Atomic Energy Agency. 1962.

One of the more remarkable consequences of the rapid development in scintillation counting devices over the past 10 years has been the proliferation throughout the world of equipment capable of measuring extremely low levels of radioactivity in the human being. The determination of body burdens of naturally occurring potassium-40 and of the caesium-137 produced in nuclear test explosions is fast becoming commonplace. This symposium, organized by the International Atomic Energy Agency in 1961, provided a unique opportunity for over 100 workers

from more than 20 countries to exchange experiences in this field. The published proceedings are divided into an introduction, by Professor F. W. Spiers, of the University of Leeds, and six other sections, covering the properties of radiation detectors; calibration techniques; typical whole-body counting facilities; studies of natural and contamination burdens of radioactivity; data-processing techniques; and clinical applications of whole-body counting. Discussions are fully reported; indeed, there is one notable example of a discussion almost three times as long, in print, as the paper considered. Clinical applications of whole-body counting are concerned chiefly with studies of the retention of administered radionuclides and the possible replacement of troublesome cumulative excreta collection by direct periodic measurements on the patient concerned; work reported here includes long-term exchangeable sodium studies, measurements of total body potassium in patients with muscular dystrophy, and miscellaneous clinical investigations, as for example measurements of the absorption of iron from the gastrointestinal tract, using test doses of iron 59, studies of protein turnover using iodine 131-labelled human serum albumin, and metabolic studies with 'bone-seeking' radionuclides such as calcium 47 and strontium 85. The equipment described ranges from elaborate systems involving 8 ft. × 8 ft. × 8 ft. rooms shielded by 6 in. thick steel plates, housing four 5 in. diameter × 4 in. thick crystals, to apparatus consisting only of eight Geiger-Müller counters, mounted directly over a patient's bed. Many of the papers are noteworthy for the amount of detailed information and analysis they contain, and there were particularly interesting discussions on calibration problems. The papers concerned with clinical applications gave most emphasis to the techniques employed, and there was little discussion of the clinical implications of some of the data presented.

The volume is very well produced, and was published with commendable speed. It can be strongly recommended to anyone concerned with the installation or use of whole-body counting equipment, in relation to clinical medicine, as well as to those concerned with problems of radioactive contamination of human beings.

N. G. TROTT

THE BORDERLAND OF EMBRYOLOGY AND PATHOLOGY, 2nd ed. By R. A. Willis. (Pp. xi + 641; 226 figures. 90s.) London: Butterworth. 1962.

When it was first published in 1958 *The Borderland of Embryology and Pathology* was rightly acclaimed as a major contribution to medical literature. In this new edition the format of the book, the chapter headings, and all the illustrations remain the same; the number of pages has been increased by 14 and over 300 new references have been added to the bibliography. The first three chapters give basic information concerning experimental embryology, the early development of the human embryo, and the structure and function of embryonic and foetal tissues. Malformations and their causes are covered in the next three chapters. In chapter 5, the paragraphs on the genetic determination of sex, human intersexes, and sex-chromosomal abnormalities have

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CORRECTIONS

In the paper 'Observations on the use of the Coulter model D electronic cell counter in clinical haematology' (Blades, A. N., and Flavell, H. C. G., *J. clin. Path.*, 16, 158-163) Fig. 9 should be Fig. 8 and *vice versa*. Also on page 163, col. 1, line 3 should read 'gives a blank count at a threshold level of 5 of about 300 per 0.5 ml.'

In the book reviewed on page 185 by E. S. Anderson of ENTEROBACTERIACEAEINFEKTIONEN the sentence '(There is a misprint . . . 1923-1928.)' should read '(There is a misprint in the text at this point, the English figures being erroneously quoted as covering the period 1933-38 instead of 1923-1938.)'