

environmental factors in the development of a particular malignant disease.

The true value of the monograph is that it serves as a rich source of information covering many and varied aspects of cancer which are related to heredity.

P. C. KOLLER

## VIRUSES AND DISEASE

### Clinical Virology

By R. H. A. Swain and T. C. Dodds. Pp. xii+318. (Edinburgh and London: E. and S. Livingstone, Ltd., 1967.) 75s. net.

WHEN so much virology is directed towards molecular biology, it is worth recalling that the first impetus in the study of viruses came from the investigation of disease. Nor can it yet be said that problems associated with virus infections no longer confront us. Viruses which are capable of inducing disease in some can be isolated on occasion from others who are perfectly healthy. Some viruses appear to have such growth requirements that it has not yet been possible to find a suitable substrate other than the human or animal host. As for the suppression of virus multiplication by drugs, only the fringe has been reached.

The appearance of this book, which sets out to correlate known facts on the aetiology, clinical manifestations, pathological effects and epidemiology of virus diseases affecting man, is timely. It should be useful both to students seeking basic information and graduates facing problems of diagnosis and the general handling of such diseases. The information provided is clearly set out and easy to read. It is concise but on the whole adequate for its purpose. Those who wish to read further are given guidance at the end of each chapter. There is an impressive array of charts and photographs, many in colour, in support of the aim to supplement mere words by illustration. This adds to the attractiveness of the book.

There are four sections, the first two comprising the major part. Respectively, these are concerned with (1) general considerations of viruses, their characters and properties, together with some of the standard procedures used in the study of newly isolated strains and for the related immunological tests; (2) descriptions of virus diseases affecting different systems of the body, the virus groups concerned, and the methods by which they are identified. The slowness of virus laboratories in reporting results of investigations is a worry to clinicians. The information given here may help towards a better understanding of laboratory problems. At the same time there is continual pressure for more rapid diagnostic tests and in a still developing subject a book does not contain all the latest information. For example, in the diagnosis of rubella, important because of its association with congenital deformity, there is no mention of the simple and rapid haemagglutination-inhibition test.

Section three deals with infections caused by bedsoniae, the group which includes psittacosis, lymphogranuloma venereum, trachoma and inclusion conjunctivitis, and the rickettsiae. Of the latter only Q fever is prevalent in Britain, but no reference to studies carried out here is quoted. In section four on the control of infections there is useful information on active immunization including schedule guides for babies and international travellers. There is also an account of the state of chemotherapy in virus diseases.

No book is free from errors or omissions. On page 176 is the surprising statement that there are thirty-two Coxsackie A serotypes. Some of the references have careless spelling faults, and a reference to a British manual of virus methods would have been helpful. Despite such mild criticism this should be a very useful book.

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## RESEARCH ON PROTOZOA

### Research in Protozoology

In four volumes. Edited by Tze-Tuan Chen. Vol. 1. Pp. vii+428+16 plates. (Oxford, London and New York: Pergamon Press, Ltd., 1967.) 110s. net.

IN 1941 a collection of review articles edited by G. N. Calkins and F. M. Summers was published under the title *Protozoa in Biological Research*. It resulted from the co-operative endeavour of a number of protozoologists concerned about "the best means to stimulate further research on these unicellular animals". For twenty-five years "Calkins and Summers" has remained an authoritative work of reference covering a wide range of research studies on the protozoa. In *Research in Protozoology* the editor has set out to survey the progress of studies on protozoa in the quarter of a century since the earlier book by presenting a series of review articles spread over four volumes and covering the principal aspects of protozoan biology. This is a formidable undertaking, for the 1941 book comprised some twenty articles occupying 1,150 pages, and the spectacular advances in recent years in such fields as biochemistry and ultrastructure studies have had far-reaching effects on every aspect of protozoological research.

Reviews written for such a purpose might be expected to bring all aspects of a particular topic together, so that a biologist with only a general knowledge of protozoology may be able to gain a broad understanding of the subject; they might also be expected to extend up to the frontiers of current knowledge in the subject so that a research worker, perhaps in a closely allied field, may be able to find his way around the recent literature with confidence. To do both of these in the same article is a difficult task, and becomes more difficult as the scope of the article is extended. This is clear in the present volume where the articles with narrow subject limits can be comprehensive works for reference as well as being useful for teaching, but there is a tendency for the wide-range subjects to become little more than reference lists which mean little to anyone without a good knowledge of protozoology and an extensive reference library. There are periodicals which publish review papers whose function appears to be the provision of up to date reference lists, but the articles in a book such as this, if they are to stand the test of time, should be more or less comprehensible by themselves, and should therefore contain adequate explanations and illustrations.

The first of the five articles in this volume is by Everett Anderson and deals with a restricted range of aspects of the fine structure of protozoa, namely, a miscellany of cytoplasmic inclusions and those cytoplasmic organelles that are of membranous construction. Such structures as cell surface membranes and their modifications, cell walls, fibrous structures and nuclei will presumably be dealt with in later volumes. Dr Anderson gives the reader a fair impression of the information available in this field up to 1964, although he only quotes a small proportion of the relevant literature on the subject. The chapter includes twenty-four micrographs which illustrate more or less convincingly the structures described.

The article on "Motile Behaviour of Protozoa" by Theodore Jahn and Eugene Bovee occupies 160 pages and lists more than 1,000 references—it is almost a book in itself. The scope of the subject matter is so wide that even with this extensive treatment it was not possible to do justice to some aspects of protozoan motility; many things are inadequately explained and there are no illustrations at all in most sections of the chapter. There are clearly arguments in favour of attempting to integrate all information on the movement of protozoa within a single framework, but this material would fit better into the pattern of this sort of review if it had been broken up into several chapters covering such aspects as "Motor responses