The biology of parasitism. A molecular and immunological approach


This is the 9th volume in the remarkable series of books emanating from the annual summer courses on the biology of parasitism that were first held at the Marine Biological Laboratories in Woods Hole, Massachusetts, in 1980. Ever since their inception, these courses have made an immeasurable contribution to the progression of the discipline of parasitology into the modern era of molecular biology and immunology. The present volume is an exceptionally rich addition to the literature in this field.

The book contains a heterogeneous and very broad collection of papers which range from a global view of the impact of parasitic diseases by K. S. Warren and of zoonoses by G. S. Nelson, through an account of two "new" diseases, the rickettsial infection known as Lyme disease and human babesiosis by A. Spielman, a series of papers by various authorities on vaccination against malaria and other parasitoses, several erudite papers on protozoal biochemistry and molecular biology and, finally, the description of a soil nematode as a novel model for studies on helminths by S. Ward.

A full list of the outstanding papers and their authors is beyond the scope of this brief review. Suffice it to state that, altogether, the book contains nine papers under the heading of "The biology of parasites and parasitic disease", ten on "Parasite immunology" and nine on "Parasite molecular biology, biochemistry, and genetics", by a total of 42 authorities of international standing. When one reads that each course takes a mere 16 students for a period of only 9 or 10 weeks, it is understandable, with such an outstanding wealth of scholarship being made available to them, that "Woods Hole" has gained an unsurpassed reputation among parasitologists the world over. The best that most of us humble mortals can hope for is to buy and read the written product of the courses. The publication itself is of an excellent standard for which the editors and publishers are to be especially commended. The price may sound high but the book is, in my opinion, well worth it.

W. Peters

BOOKS RECEIVED

Tumorigenic DNA viruses


This volume focuses on the three groups of DNA tumour viruses that are associated with human disease, namely the papillomaviruses, hepatitis B virus and Epstein-Barr virus. The first part of the book comprises three chapters on papilloma viruses and one on hepatitis B each written by a recognised expert in the field. These are general chapters which explore the involvement of these viruses in tumorigenesis and give a good up-to-date overview of the field. They would make useful and interesting reading for the general virologist and for research students new to the field. In both cases the animal viruses are discussed in detail; however, in the case of hepatitis B virus information on the human virus infection is rather sparse. Another chapter with a more clinical bias (equivalent to that written by H. Zur Hausen on papilloma viruses) would provide a more comprehensive overview of the subject.

The remainder of the book comprises eight chapters on the Epstein-Barr virus, which reflects not only the editor's own field of interest, but also the rapid progress being made in this field at the present time. Each contribution focuses on a specific aspect of EB virus research, beginning with chapters on molecular biological aspects of the viral genome, latent viral transcripts and B cell immortalisation. Here, the sequence of the genome is analysed in detail, and the application of the knowledge derived from the sequence to the identification and functions of latent viral proteins is described. The following two chapters describe the biological interaction between EB virus and infected cells. The ability of the virus to cause B cell activation, differentiation and immortalisation is discussed at the level of cellular antigen expression and growth factor interactions, and the more recently described infection of squamous epithelial cells is likewise explored. The final three chapters have a clinical bias describing EB virus infection in AIDS patients, the immune response to the virus and the virus infection in Burkitt’s lymphoma. The chapters are for the most part well written and informative to the tumour virologist. However, a certain lack of conformity in, and definition of, the nomenclature used may make it difficult for those not in the field to follow in detail. Despite this the book is full of useful and up-to-date information which most virologists would find not only informative but also fascinating.

DOROTHY H. CRAWFORD