

LIVROS — BOOK REVIEWS

MACLEAN, Norman — **Haemoglobin**. London, Edward Arnold, 1978. 67p. illus.
(The Institute of Biology's Studies in Biology No. 93). ISBN 0 7131 2698 1

Haemoglobin is probably the best characterized of all the proteins. Its structure, mechanism of action, role in overall physiology, synthesis, genetics and evolution are well understood. It has become, as it were, the rat of molecular biology and biochemistry, and much pioneer research in these areas has used the molecule as a model system. In the same way, haemoglobin is a good teaching model and the student who clearly understands the details of its structure and function will have a sound

grasp of modern biochemistry. This book presents all the aspects of our knowledge of haemoglobin in a manner that presupposes only an elementary knowledge of some general science. As well as the key chapters on structure and function, synthesis (and its control), and genetics and evolution, there are sections on the distribution of haemoglobin in living organisms, and a review of important experiments that have involved haemoglobin.

IMAZUMI, Tadayoshi — **Cancer and Field**. Tokyo, Maruzen Co., 1982. 117p. illus.

It is tried to obtain a new aspect on cancer by using the concept of field formed in the tissue from which cancer arises. From the obtained standpoint, the next primitive but fundamental question on cancer is asked with references of the results of cancer research: Why does cancer arise? Why is the living body with cancer going to die? What is the meaning of

cancer to the living body? Let us have such primitive but fundamental questions on cancer, and think! The obtained standpoint may be able to have a new aspect on these primitive but fundamental questions. It will be necessary to consider such problems now again, and this book will make a chance to consider such problems.

WEINSTEIN, L. & FIELDS, B.N. — **Seminar in Infectious Disease**. v. 4: **Bacterial Vaccines**. Edited by John B. ROBBINS, James C. HILL & Jerald C. SADOFF. New York, Thieme-Stratton, 1982. 461p. illus. ISBN 0-86577-020-0

Development of effective vaccines that prevent infectious diseases are the ultimate aims of much of the research on infectious disease. The appearance of a vaccine in a practitioner's refrigerator is the last step in the process. In fact, the number of important infectious diseases that have still not been controlled by effective immunization remains quite high. The reasons for our inability to control such diverse diseases as *H. influenzae* meningitis and gonorrhoea are being increasingly better understood. As the number of new approaches that allow us to understand the mechanisms of host immunity as well as the nature of bacterial antigens has increased, the feasibility of development of newer vaccines has improved. Thus,

in the course of remaining current with the "state of the art" of bacterial vaccines, we are also keeping abreast with an understanding of the mechanisms involved in microbial pathogenicity and host. The subject of the volume was selected by the editors because we felt that the topic was both timely and of enormous importance for those interested in infectious disease. We are very pleased with the breadth and depth of important new information that it contains and feel that this should provide the reader with an awareness of both the art and science of an important area of the practice of infectious diseases (Foreword — Bernard N. Fields and Louis Weinstein).

ANDERSON, R.M. & MAY, R.M., ed. — **Population biology of infectious diseases. Report of the Dahlem Workshop on Population Biology of Infectious Disease Agents.** Berlin 1982, March 14-19. Berlin, Springer Verlag, 1982. 315p. illus. (Dahlem Workshop Reports, Life Sciences Research Reports, Editor: Silke Bernhard, v. 25) ISBN 3-540 11650-8

The scope of this Dahlem Workshop Report is to survey the current state of knowledge and to identify important questions in the overall association between host and parasite populations. Under general headings of impact, transmission, control, and co-evolution, there is discussion of the extent to which parasites (broadly defined to include viruses, bacteria, protozoans and fungi along with the more conventional helminths) regulate natural populations, including human populations. Systematic patterns in the transmission and maintenance of parasitic infections are discussed, and the im-

plications for control are noted. The coevolutionary relationship between hosts and parasites is reexamined and new questions are raised. Throughout, the book provides an overview and synthesis of the present state of the various subjects — combining the perspectives of ecologists, population biologists, medical and veterinary scientists and practitioners, mathematicians, public health scientists, entomologists and parasitologists — with emphasis on the identification of important unsolved questions.

HAUCK, Helge — **Candida-Mykosen im Alter. Die Bedeutung der Candida albicans. Infektionen der Haut und der Schleimhäute für die Geriatrie.** Berlin, Grosse Verlag, 1981. 88p. illus. (Grosse Scripta 6). ISBN 3-88040-026-1

This book, by Helge Hauck, deals with candidiasis in elderly people. In old age, host immune defense mechanisms usually decrease, resulting in a higher susceptibility to Candida infections, generally by *Candida albicans*. In the present volume, which is well illustrated, with up to date literature references, the subject is approached from the point of view of

micology and immunology, using mainly immunofluorescence and agglutination tests to confirm diagnosis of intertriginous and oral lesions, caused by this predominantly opportunistic yeast. This work should be consulted by all those devoted to geriatrics, mainly because of its original contribution to the immunological diagnosis of candidiasis.

HORNE, Robert W. — **The Structure and Function of Viruses.** London, Edward Arnold, 1978. (The Institute of Biology's Studies in Biology No. 95). ISBN 0 7131 2706 6

This book provides a clear and concise introduction to the structure, assembly, composition and biology of selected human, animal, plant and bacterial viruses. A short history of virology is given before describing the recent developments in this field. The electron micrographs and line drawings included show that most viruses exhibit precise geometrical forms, other possess complex structures with highly functional components. Viruses attacking bacterial cells have been well studied and it is from this that the fundamentals of the viral life cycle have been worked out. The use of ani-

mal tissue culture and more recent plant cell protoplast methods has allowed viral infection to be studied without the aid of whole animals and plants. Selected plant and animal viruses are described to show the varied ways in which they attach, penetrate, multiply and are released compared to bacterial viruses. The book is brought right up to date by including a section on viral infection of mycoplasmas the smallest and probably the most primitive free-living cell without cell walls known and yet able to support the growth of something that is on the border between living and non living.