Book reviews

MODERN SCIENTIFIC ASPECTS OF NEUROLOGY. Edited by John N. Cumings. (Pp. 360; 89 figures + 13 colour plates. 65s.) London: Edward Arnold. 1960.

During the last decade progress in the science of neurology has been spectacular, especially in the fields of ultra-structure and of biochemistry. This volume is designed to bring the practising neurologist right up to date on these and other fundamental aspects of his subject. It should succeed admirably in its purpose and the pathologist who is concerned in the study of neurological disease will find it a gold mine of information.

The chapter on electronmicroscopy by Professor F. S. Sjöstrand helps one to appreciate the importance of membrane interfaces in ionic exchange while that of Dr. J. B. Finean on the x-ray diffraction analysis of nerve myelin gives an important and vivid insight into the molecular pattern of myelin. Because the primary demyelinating diseases and, in particular, multiple sclerosis, constitute the greatest neurological cause of incapacity in young adults, interest today largely centres on myelin. It is understandable therefore that half of the chapters in this book, including an important one contributed by Professor Cumings himself, are orientated around this theme and the related lipidoses and, if in recent years they have accounted for a plethora of publications, it is but a measure of the amount of work which has been undertaken, and of the importance which is attached to their study. The chapters on the histochemistry of the demyelinating diseases by Professor Seitelberger and on the lipidoses by Dr. P. B. Diezel will prove helpful to pathologists. Dr. Larus Einarson discusses the role of the nucleic acids in the metabolism of the neurone, while Professor R. H. S. Thompson considers the esterases of the nervous system and the condition of anticholinesterase intoxication. Though much has been written in recent years about nerve endings in striated muscle, the excellent and lucid review of the subject by Dr. C. Cöers will be particularly welcome.

This is an agreeable production and the illustrations are as well reproduced as they are selected.

P. M. DANIEL

LEUKAEMIA: RESEARCH AND CLINICAL PRACTICE. By F. G. J. Hayhoe. (Pp. viii + 335; 12 colour plates, 196 black-and-white figures. 80s.) London: J. & A. Churchill. 1960.

Among advances in the field of haematology during the past decade, the study and treatment of leukaemia has been prominent. Yet results have been frustrating and we are still denied the 'break through' which surely must come, permitting the replacement of palliative by rational therapy based on aetiology rather than on sequelae: the use of the all-embracing term leukaemia, related to the result rather than the cause, is one indication of this

frustration. Unhappily, attempts at classification are bedevilled by the paradox of disease processes, having nothing in common save the generic term leukaemia, being confused with closely allied conditions which are never 'leukaemic'.

During this period of obscurity it is well to have the present situation viewed in perspective and two substantial texts are currently available for the clinician. In 1958 'Leukemia' emanated from the Boston school and has now been followed in 1960 by 'Leukaemia' presenting the English viewpoint. Chauvinism or no, the latter is easily readable and provides, in Dr. Hayhoe's words, 'guide to the maze of published work which separates the tangled lines of progress in research'.

The book is in four main sections. A preliminary historical account (incidentally this makes pleasant reading) is followed by a chapter on classification. In practice, classifications suffer from being too comprehensive, for while each worker tries to include every facet, with the best will in the world one is still left with a group of 'variable, multiple or uncertain origin' and at least one reader feels that the fewer classifications there are the better. Particularly difficult to assign are what Dr. Hayhoe refers to as the 'paraleukaemic' states but which others include among the myeloproliferative dyscrasias. The latter term is convenient—very helpful to the worker—as long as one does not necessarily imply that these disorders share a common aetiology: but study of the dynamics of some of them raises the doubt as to whether the reaction is indeed proliferative. The chapter on statistics is helpful and the somewhat philosophical review of experimental studies of aetiology is concise; the author rightly acknowledges that data from animal leukaemias cannot be held to apply directly to the disease in man.

The second section, discussing the leukaemic cell, is excellent. It is Dr. Hayhoe's major contribution that morphology in leukaemia is given a new look. The standard morphological criteria have stood the test of time but are no longer wholly adequate: perhaps refined cytological and histochemical techniques may also prove to be insufficient, but this approach is well worthwhile if it permits more workable divisions of these diseases, linked with prognosis or susceptibility to therapy; the P.A.S. and leucocyte alkaline phosphatase reactions must now be utilized as routine differentiating techniques. Colour plates of microscopic morphology, so often the publisher's pride, are frequently disappointing, especially those attempting to reproduce Romanowsky stains. It is noteworthy that those selected for inclusion in this volume are, in the main, successful. Their publication is entirely justified for they portray the histochemical tinctorial reactions upon which Dr. Hayhoe places diagnostic emphasis. Much has yet to be learned about culture techniques *in vitro* and these have had disappoint-