

coronal orbital sections which are now in routine use in many conditions are not illustrated.

The book is well balanced and lucidly written. There is a good index. The most notable feature is the price—at £15.75 it is excellent value for money. It is recommended not only to clinicians but also to radiologists as an introduction to the subject.

B. E. KENDALL

Physiology and Pathobiology of Axons Edited by Stephen G. Waxman. (Pp. 448; illustrated; \$42.25.) Raven Press: New York. 1978.

This is a scholarly work in an area where original work is scattered through a wide range of primary journals and it is beautifully produced, the illustrations including 112 excellent ultramicrograph plates. An important theme is the structural and functional heterogeneity of axons, suggesting a more complex role in signal processing than would be supposed from the conventional view of the axon as a conductor. Interesting recent studies show that sodium channels are more concentrated at nodes of Ranvier and become redistributed after demyelination. The controlling role of the glia and Schwann cells adds another facet to the symbiotic relation between them and the axon, so commonly ignored in studies on peripheral neuropathy in recent years. The editor describes a histochemical marker for the electrogenic membrane at the node of Ranvier, which should be a useful new tool. The evidence that internodal conduction time is not constant in normal fibres, but varies with fibre diameter, is also important.

The 34 contributors are well chosen to present all aspects of the axon from ion-conductance mechanisms to morphology of axon and myelin in health and in disease. There are excellent reviews of immunological and biochemical aspects of axonal diseases of the central and peripheral nervous systems. The biochemical understanding of many genetically determined diseases has advanced rapidly but the same can not be said of acquired diseases. The editor has wisely chosen to let his very distinguished panel present their themes in their own ways, so providing readers with an excellent compendium of the active work on a somewhat neglected aspect of neurobiology.

J. A. SIMPSON

Clinical Pharmacology of Psychotherapeutic Drugs By L. E. Hollister. (Pp. 239; illustrated; £11.00.) Churchill Livingstone: Edinburgh. 1978.

The *Clinical Pharmacology of Psychotherapeutic Drugs* is the first volume in the series of monographs in clinical pharmacology. The author, who has had considerable experience in the evaluation of drugs in psychiatry and the application of principles of clinical pharmacology to psychiatry, follows a brief introductory chapter with chapters on anti-anxiety drugs, hypnotics, anti-depressants, antipsychotics, and lithium. Each chapter is a self-contained review of drug use in these different conditions. These chapters accurately reflect current biochemical and pharmacological views on the pathophysiology of mental disease and the mechanism of drug action. This up-to-date presentation would be valuable not only to specialists in neurology and psychiatry but also to those in more general medical practice who use these agents, often on an empirical basis and with little information about the underlying mechanisms of drug action. If I had any criticism it would be that the introduction is rather short and may not prepare the nonclinical pharmacological reader adequately for some aspects of drug disposition and pharmacokinetics which are later discussed.

J. L. REID

Essays in Neurochemistry and Neuropharmacology Edited by M. B. H. Youdim, W. Lovenberg, D. F. Sherman, and J. R. Lagnado. (Pp. 228; illustrated; £10.50.) John Wiley and Sons: Chichester. 1978.

This volume is part of a series of articles which are orientated specifically to postgraduate research students and research workers in neurochemistry and neuropharmacology, rather than to the clinician. As it is a collection of essays, the articles are not intended to be related to each other so there is no overall theme, and some will be of greater use to the clinician than others.

The first essay, on feedback regulation of central monoaminergic neurones, gives a critical assessment of the functional importance of complex interrelated autoregulatory mechanisms, but any discussion on the reasons for their existence is avoided as being beyond the scope of the essay. This

seems a pity because the stated objectives of the series include familiarisation of the reader with current specific problems in these neurosciences.

This tends to be one weakness in the articles in this volume—the salient features of the problems are seldom identified and emphasised in a way likely to give the reader a clear perspective. Often there is too little synthesis of concepts, or pointers for future work.

One exception to this is the essay on the importance of the availability of tryptophan to cerebral serotonin. The controversial aspects are critically appraised and a clear personal view is expressed, with reasons, that there is far less real controversy than would appear to be the case from published research papers and reviews. Another is the critical account of the current state of play in the proteins and memory game.

The remaining essays tend in the main to be too detailed and comprehensive at the expense of any clear message or conclusion. It could represent useful background reading for the clinician wishing to keep up with recent developments in certain aspects of neurochemistry and neuropharmacology, were it not for the lack of an index, which is a serious deficiency in any book of this type.

H. S. BACHELOR

Antiepileptic Drugs: Quantitative Analysis and Interpretation Edited by C. E. Pippenger, J. Kiffin Penry, and Henn Kutt. (Pp. 367; illustrated; \$38.35.) Raven Press: New York. 1978.

The last few years have seen a flurry of books on epilepsy from Raven Press, many of them hastily compiled from national or international meetings, and therefore with much overlap between them, both of authors and of topics. The present volume was put together from the proceedings of an American national workshop on measurement of antiepileptic drugs held in 1976, and attempts to cover three areas: analytical methods, quality control of laboratory assays, and clinical applications of drug levels. Its contributors are, without exception, North American, and the information given is in many places not suitable for the European reader—sodium valproate, for instance, gets

scant mention because it was not generally available in the USA at the time of the workshop. As two-thirds of the book are set aside for discussion of analytical methods, it will be of limited interest to any but those actively engaged in laboratory work, but for the latter there is much information of a nature not easy to find elsewhere. Particularly important is the message of quality control, without which the reliability of laboratory results can be very poor. The analyst will obtain useful guidance from this book on the clinical application of drug levels, but in my view the contributors swing too far in their enthusiasm for measuring drugs. For instance, although it is admitted that "controversy still continues as to whether or not primidone itself has any anticonvulsant activity apart from derived phenobarbitone," the belief is nevertheless expressed that "determination of serum levels of primidone . . . is a clinically useful procedure." Why? Until we know that it is active in man, and we have worked out the degree of activity relative to derived phenobarbitone, why waste the laboratory's time (and money)? But perhaps views on the relative value and cost of tests are different under the American health care system than here.

ALAN RICHENS

Clinics in Endocrinology and Metabolism Metabolic Effects of Alcohol Volume 7, Number 2 Edited by V. Marks and J. Wright. (Pp. 466; illustrated; £8.25.) W. B. Saunders: London, Philadelphia, Toronto. 1978.

In many publications on alcohol and alcoholism it is easy to sink in a morass of conflicting views on both metabolism and treatment.

This book gives a good presentation of the effects of ethanol on metabolism by considering first its general influence, and then its effect on specialised aspects of metabolism. The general aspects are covered competently by Badawy, followed by a useful chapter on the influence of ethanol metabolism on the metabolism of other drugs by Chakraborty. Fink and Rosalki discuss the clinical biochemistry of alcoholism. The book then turns to the influence of ethanol on specific metabolic systems—Janus and Lewis on lipid metabolism, one of the editors, Dr Marks, on carbohydrate

metabolism, and the other editor, Dr Wright, on the endocrine effects of ethanol. Two linked chapters follow, one on the effects of ethanol upon neurotransmitters by Littleton, and the other on the nervous system by Shaw. Nutrition is discussed by Thomson, and Gazzard and Clark cover the alimentary system. The book ends with a comprehensive presentation of alterations to the haemopoietic system by Cumming and Goldberg.

In general, each of the chapters covers its topic adequately. There is, however, some regrettable overlap between the effects of alcohol on the nervous system and on nutrition that could have been avoided by more judicious editing. It is also surprising that in the chapter on alcohol and nutrition nothing is said about anaemia in alcoholism, although this is fortunately covered in the chapter on alcohol and the haemopoietic system. More seriously, the chapter on nutrition which considers the influence on the B vitamins in some depth, says little or nothing about the other vitamins, and specifically nothing is said about vitamin C deficiency which is commonly found in alcoholism. Despite these few failings, this is a useful book for anyone requiring a body of basic information on the metabolism of ethanol.

MICHAEL R. MOORE

Neurochemical and Immunologic Components in Schizophrenia Edited by Daniel Bergsma and Allan L. Goldstein. (Pp. 431; illustrated; \$46.) Alan R. Liss: New York. 1978.

Schizophrenia is a disease of unknown aetiology. This book is the result of a symposium at which certain aspects of the genetics, virology, and immunology of the nervous system were discussed in the hope that direction might be given to future research in schizophrenia. Having read this book, I came to the conclusion that it does itself have a distinct schizoid flavour. While many of the contributors are internationally renowned in their fields and their discussions are of merit in their own right, these seem to have little or no relation to the problem of schizophrenia. The first section is devoted to what constitutes schizophrenia and we are told in summary that "schizophrenia, which may be only a symptom complex common to several types of disorders, is

distinguishable from other causes of some of the symptoms!"

The second section is on virology, and we have heard it many times before. Chapters include a brief discussion on the role of slow viruses by Gajdusek, a review of the evidence for infection in multiple sclerosis by Carp, with a claim for the recognition of a replicating agent in the disease which has since been disproved, and a detailed review of the HLA system in multiple sclerosis by Jersild. A short chapter on HLA antigens in schizophrenia is presented but we are told that because of the small patient sample, definite conclusions cannot be drawn.

The third section is a mixture of papers on general immunology, autoimmunity, systemic lupus erythematosus, immune complex deposits in the choroid plexus, experimental allergic encephalomyelitis and neuritis, and a truly provocative chapter on "possible utilisation of extracorporeal immunosorption and other immunologic methods in the treatment of schizophrenia."

The fourth section deals with studies of the CSF in the disease and studies of sera from schizophrenic patients: there was a significant increase of passive haemagglutination of coated erythrocytes found in schizophrenics with a significant decrease in the level of nerve growth factor and antigen demonstrated in the sera of schizophrenics. This section ends with a novel chapter on the use of phenylalanine ammonia-lyase and its use in the selective manipulation of the levels of certain aromatic amino-acids in the serum.

The final section covers aspects of humoral and cellular immunity, and I must admit to several surprises. The first and second papers to me were indecipherable, but there seemed to be a claim that the serum and lymphocytes of schizophrenics are abnormal. A final paper contains a summary of the data on the inhibitory effect of chlorpromazine on lymphocyte activation.

In summarising the conference the chairman stated that it had been an eye-opener for him: I can only concur. The study of schizophrenia is such a controversial field that I do not think this muddled compilation will assist students, research workers, or clinicians.

P. O. BEHAN