Book reviews

Excitatory Amino Acids. Edited by Peter J Roberts, Jon Storm-Mathisen and Harry F Bradford. (Pp 508; £48.00.) Basingstoke: Macmillan Press, 1986.

The excitatory amino acids, L-glutamate and L-aspartate have come of age as neurotransmitters in the nervous system. After much debate the evidence available suggests these substances fulfill the necessary criteria. Now the search is on to discover the function of the extensive excitatory amino acid pathways in the nervous system. The use of the excitatory amino acid agonist kainic acid has shown the importance of these substances as excitotoxins and has raised the possibility of their involvement in neurodegenerative disease.

This volume on *Excitatory Amino Acids* represent the proceedings of a symposium on this topic held in 1985. The twenty-eight chapters cover the whole spectrum of excitatory amino acid research. Initial sections deal with the historical aspects, the compartmentalisation and metabolism of glutamate and aspartate and other evidence for the transmitter role of these substances including the localisation to specific neuronal pathways in brain. Later chapters deal with a number of very important issues. The role of substances such as quinolinic acid, acting on excitatory amino acid receptors as endogenous excitotoxins is discussed. The nature of excitatory amino acid receptors is comprehensively discussed. In this area, there has been many advances which now distinguish three sub-types of receptor, namely kainate, quisqualate and NMDA sites. Such discoveries have relied largely on the synthesis of novel selective excitatory amino acid agonists and antagonists but little space is devoted to this area. Lastly, the role excitatory amino acid systems may play in epilepsy, ischaemia and stroke is explored. Indeed, since the book was compiled much interest has centred on the role of NMDA antagonists in these areas. Excitatory amino acid systems are now well described. The existence of these pathways in the nervous system offers the opportunity for novel approaches to therapeutic intervention. The field is only in its infancy but appears to have much to offer in the future. This volume will be of interest to laboratory scientists and to clinicians working in the areas of epilepsy and stroke. In such a rapidly expanding field it is already somewhat dated but libraries should stock it as a refer-

ence volume for the excitatory amino acid area. As with many such conference based volumes, it is a camera-ready book. At £48 I would have hoped for a better prepared typeset volume.

P JENNER

Diseases of the Nervous System: 2 volumes. Clinical Neurobiology. Edited by Arthur K Asbury, Guy M McKhann and W Ian McDonald. (Pp 1653; £125.00.) London: William Heinemann Medical Books Ltd, 1986.

When I became a full-time neurologist more than 30 years ago I acquired Kinnier Wilson's *Neurology*. Sad to say, I have rarely consulted it. The clinical descriptions are excellent but there is no guidance on mechanisms of disease or on the applied physiology of the human nervous system. Well known textbooks have occupied increasingly wide spaces in my library for occasional reference but, like the lamp-post for the inebriated, more valuable for support than for illumination. The multi-volume *Handbook* is but a street of lamp-posts. At the end of my career there is suddenly a benison of good books on the principles of clinical neurology and its scientific bases. On my own shelves I now have five, thanks to editors who have kindly asked me to review them for this and other journals, for the expense would otherwise be formidable. Three are American, one British and this two volume work, a combined effort, is the best of all. Wilson, Brain and others could reasonably essay to present the whole field of neurology. It is no longer possible for one writer to be authoritative in all aspects so it is imperative that the editors should recognise growing points and select good contributors. Asbury, McKhann and McDonald with 193 contributors have succeeded better than any hitherto. This is a superb book, well worth the cost of a flight from London to Glasgow (return of course!).

The temptation to quote is almost irresistible. It is full of useful insights as well as facts based on very recent research but to balance this with personal disagreements or minor omissions would be misleading because few chapters are less than authoritative and there are 136 of them. Volume I covers the biology of neurons and supporting tissues of the nervous system, neuromuscular physiology and disease, motor control (showing signs of rigidity?), cranial

nerves, autonomic functions, genetic and metabolic diseases (excellent on first principles) and disorders of development including aging, mental retardation and the acquisition of language. Volume II has the best contemporary brief account of disorders of higher cerebral functions, psychic (sic) function, pain, paroxysmal disorders, and pressure, followed by a small but good section on vascular diseases. Neoplasia, neurodegenerative and demyelinating diseases are followed by environmental disorders (an odd section heading for trauma, nutrition and toxicity) and infections. Surprisingly, neuroimmunology gets only 20 pages without reference to antigen-presentation, idiotype network, the complement systems or the peculiar nature of intrathecal immunological reactions. Fifteen chapters on neurological manifestations of systemic diseases are splendid for the consultant neurologist in a general hospital. Though brief, they remind one of dimly remembered linkages (but, in a valuable chapter on cortical evoked potentials, the wise comment is made that clinical correlations are not necessarily clinical applications). The concluding chapters make it clear to this reviewer that clinical neurology and neurophysiology investigate neuronal systems while imaging techniques define the supporting structures of the nervous system. Twenty years on, PET scanning still appears to be "promising". MRI of monoclonal antibodies with paramagnetic labelling is still an unachieved possibility. Support your local scanner appeal until magnetoencephalography is perfected for non-invasive monitoring which is dynamic on the time scale of neural activity. This uniquely comprehensive book mentions them all. Stimulated interest is facilitated by well chosen references. A welcome and unusual feature is that key references are designated with an asterisk, a small point but indicative of the care with which this magnificent book has been assembled and edited.

JA SIMPSON

Clinical Neurosurgery Vol 33. (Proceedings of the Congress of Neurological Surgeons Honolulu, Hawaii, 1985.) Edited by John R Little. (Pp 702; £54.00.) London: Williams & Wilkins, 1986.

Clinical Neurosurgery records the Proceedings of the Congress of Neurological Surgeons, and this volume those of the 35th meeting held in Hawaii in late 1985. There