Book reviews

Neurotransmitter Receptor Binding. 2nd Ed. Editors: Henry I Yamamura, SJ Enna and Michael J Kuhar. (Pp 256; \$58.00.) New York: Raven Press, 1984.

Neurotransmitter receptor binding has become an integral part of the modern neurosciences. As more and more neuroactive substances are discovered in brain so the number of receptor binding techniques proliferate. The ability to take a radioactive ligand and to show an interaction with a specific binding site in nervous tissue has revolutionised some aspects of neuropharmacology. However, the use of ligand binding has widened so as to make use of them for drug screening and for the measurement of drug concentrations in biological fluids. However, as with many relatively simple techniques, there are many hidden pitfalls not only in methodology but particularly in data interpretation.

The second edition of this volume is very welcome since the first saw many of us through the difficult problems of establishing ligand binding assays in our own laboratories. It is designed as a laboratory guide to the topic but fluctuates between purely theoretical aspects to very practical considerations. The second edition contains new chapters on peptide receptors and sodium sensitive voltage channels, the importance of which has only become apparent in the past few years. Most aspects of ligand binding techniques are covered from straight-forward *in vitro* binding assay through to auto-radiographic techniques and receptor purification. I was a little surprised that more space was not given to *in vivo* ligand binding particularly with its application to brain scanning. Some chapters are very general while others of necessity centre on those investigations where more detail is known. This is particularly true of the tremendous advances made in the purification and characterisation of cholinergic receptors. As a practical guide the chapter on autoradiography by Michael J Kuhar is outstanding and certainly will aid those attempting to establish such techniques. Overall, a book for the laboratory and one to be recommended as essential reading for research workers contemplating this area. However, the book alone will not solve many of the problems which will be encountered. After all is said and done only practical experience in the laboratory can provide the real answers.

P JENNER

Brain's Clinical Neurology. 6th edition. Revised by Sir Roger Bannister. (Pp 563; £30.00 h/b; £12.50 p/b.) Oxford: Oxford University Press, 1985.

Brain's Clinical Neurology, in its revised form by Sir Roger Bannister, will already be well known to readers of this journal. The sixth edition, published this year, retains the same general outline as its predecessor. It is slightly longer as a result of inclusion of important new material both in the text and illustrations. This modernisation relates to information regarding neuro-transmitter substances, new investigation and imaging techniques, as well as up-to-date revision of many sections describing specific diseases.

The book remains an important resource for students and young doctors acquainting themselves with Neurology.

IMS WILKINSON

Movement Disorders: Tremor. Edited by Leslie J Findley and Rudy Capildeo. (Pp 492; £60.00.) Basingstoke: Macmillan Press, 1984.

Since Denny Brown's *The Cerebral Control of Movement* published in 1966 we have witnessed a number of books on this subject, of increasing complexity and of greater specialisation. A monograph on a single type of involuntary movement illustrates this trend. Such a work must combat the justified criticisms of some publications: excessive zeal and profligacy. Readers of this book will find that Findley and Capildeo and their international team of contributors have succeeded in this task.

In the first section they cover general aspects of definition and classification, physiology, pathology and pharmacology. The second section, in many ways the most interesting, deals in detail with neurophysiology. It taught the reviewer much of the fascination of modern sophisticated techniques. These have made intelligible the complexities of the organisation, patterning and neuronal sets of intrinsic oscillations of neurons, their interplay with peripheral motor and sensory factors and the emergence of the clinical phenomenon—shaking. Tremor appears in response to lesions which release primitive, stereotyped motor mechanisms, probably in response to rebound excitation after hyperpolarisation of the membrane potential. A degree of synchrony must exist between dynamic resonant frequencies in the

limbs and the central neuronal pattern of output. Parkinsonian rest tremor is seen as the product of deafferentation of thalamo-cortical circuits on the effector system, modified by variables in the peripheral input; this makes sense of the results of thalamotomy in the control of tremor. Essential tremor is said to result from rhythmic bursts arising in the thalamus, with lack of entrainment of rhythmic input, plus modification by peripheral factors. It can be abolished by lesions of the thalamus and by hemiplegia. Clinically, the association with rigidity, and the occasional presence of rest tremor are described and explain the difficulty experienced even by experts in distinguishing essential tremor from Parkinsonism. The occurrence of an identical tremor in Charcot-Marie-Tooth disease, Guillain-Barré syndrome and a wide range of other neuropathies probably indicates the subtle effects of motor fatigue and diminished sensory input. It becomes clear that essential tremor is distinct from enhanced physiological tremor (smaller amplitude and greater frequency) and that the latter condition is dependent on enhanced beta-adrenoceptor activity. Cerebellar tremors, kinetic (intention), postural and titubation are clearly separable and their mechanisms are well described. The third and fourth sections comprehensively describe essential tremor and Parkinsonian tremor, leaning heavily on chapters by Findley, whose work has advanced our understanding of assessment techniques and of beta blockade. Stanley Fahn lucidly reviews cerebellar tremor in the fifth section. A miscellany of essays on ocular oscillations, diverse tremulous states and the role of tremor in the organisation of the nervous system complete the text.

I strongly commend this book to those with a special interest in movement disorders. It provides the detail and expertise only attainable in a multi-author work and I found it intelligible and stimulating throughout. It is inordinately expensive, but this I am sure has no relevance to the benign rhetoric and humour of the good Earl of Stockton.

JMS PEARCE

Lecture Notes on Psychiatry 6th Edition. By James Willis. (Pp 250; £5.50.) Oxford: Blackwell Scientific Publications, 1985.

Dr Willis has written a brief introductory textbook for medical students about to commence their psychiatric clerkship. The