

Book reviews

DOPAMINERGIC MECHANISMS Edited by D. Calne, T. N. Chase, and A. Barbeau. (Pp. 427; illustrated; Dfl. 80.00.) North-Holland: Amsterdam. 1975.

As L-dopa finds its place in the therapy of Parkinsonism, interest is shifting towards other dopaminergic mechanisms in the central nervous system and this book, Vol. 9 of the *Advances in Neurology* series, is a review of recent progress in these other aspects based on a symposium in Neuilly, France, in May 1974 which was sponsored by the Institut de Recherches Servier. The major research tools are the observation of behavioural changes in experimental animals attributed to postsynaptic hypersensitivity after degeneration or pharmacological blockade of dopaminergic neurones, and the measurement of cAMP which appears to mediate at some dopaminergic receptors (there may be more than one type). Interesting adaptive changes to deficiency of dopaminergic transmitter are described which must influence the 'models' suggested to account for clinical disorders. If it is true that clinical manifestations appear only when such adaptation is exhausted, the possibility of 'replacement therapy' may be less promising than it has recently seemed to be, and we should be less tolerant of the appearance of possible supersensitivity reactions to drugs such as tardive dyskinesia. Decentralisation supersensitivity is certainly not well known. The clinician must ask himself if his knowledge of pharmacology is sufficient before using a mixture of neuroleptic drugs empirically. Dopamine agonists, such as apomorphine, piribedil, and bromocryptine have sufficient differences in their actions to suggest that dopaminergic receptors are not all identical and their pharmacological effects cannot yet be predicted from first principles. It may well be that the test preparations used by pharmacologists are insufficient for selecting clinically useful drugs—a lesson we should have learned from the so-called anti-tremor drugs. Initial hopes for *m*-tyrosine in the treatment of Parkinsonism, for instance, have not been substantiated and it is becoming clear that it is an oversimplification to define a potential anti-Parkinsonism agent as one that should mimic or complement striatal dopamine, or influence motor activity in rodents. More information is required about the interrelations between dopamine and other neurotransmitters. Studies on patients with Parkinsonism are still necessary and may be rewarding. It is well known that tremor is the symptom least responsive to L-dopa and yet it may turn out to be the best indication for piribedil. In his summing up, L. L. Ivesen

points to the necessity for an extremely high degree of precision in medicinal chemistry in the design of dopamine agonists. This exciting book suggests that this precision is near to being achieved.

J. A. SIMPSON

AN ATLAS OF CLINICAL NEUROLOGY 2nd edn By J. D. Spillane. (Pp. 438; illustrated; £9.) Oxford University Press: London. 1975.

It is a pleasure to be asked to review a book with which one feels so much in tune. This expanded second edition is the very stuff of clinical neurology. In these days of colour television one is apt to look down on the idea that black and white photographs can adequately represent the dynamic concepts of neurological problems. Such is the skill with which the photographs have been taken and selected that the loss of movement is not missed. Any inevitable deficiencies in the purely graphic display are compensated for by the personal and vivid style of writing. The description of the lady with bulbar palsy clutching anxiously at her handkerchief will give an immediate sinking feeling of recognition to all neurologists.

It is, however, a book for students as well as practitioners. The first edition gladdened the Aberdonian heart as an undoubted best buy in medical publishing at the time. Regrettably inflation has struck and may limit its availability to this group, although by present day standards it is still excellent value.

A. W. DOWNIE

SYNAPSES AND SYNAPTOSOMES: MORPHOLOGICAL ASPECTS By D. G. Jones. (Pp. 196; illustrated; £14.40.) Chapman and Hall: London. 1975.

This is a scholarly book which displays the author's deep researches against a background of evaluation of historical work and contemporary developments. This book will be of greatest value as a source-book for laboratory workers in the neurosciences who will find all aspects of synaptic structure and function discussed. There are detailed accounts of the methods of the author's advanced electron microscopy and techniques of isolating and analysing synaptic components. In addition to his cogent discussion of the work of others, the author has carefully borrowed illustrations and diagrams where necessary. The book is not easy to read because the information is condensed. There are about 1000 references and just under 200 pages of heavily illustrated text but most