a useful reference book but there will be more to be said on the subject in future, hopefully.

IAN MCKINLAY

The Cerebral Microvasculature Vol 131
Edited by Howard M Eisenberg and Robert L Suddith (pp 335; \$39.50) New York: Plenum Press, 1980.

This volume of *Advances in Experimental Medicine and Biology* comprises the papers presented at a symposium on the blood brain barrier held in Galveston, Texas, in the summer of 1979. The contributions have been divided into two sections, firstly "Transport properties and permeability" (13 papers), which includes papers on active transport, enzyme systems and sodium and potassium flux in isolated cerebral capillaries and enzyme activity and behaviour in cell culture of isolated endothelial cells. There are papers on the metabolism, structure and function of the vascular basement membrane, blood-retina barrier and two papers on central adrenergic control of vascular permeability. The second part of the book is on "Perturbations of the barrier" (12 papers) and includes papers on the effects of anaesthesia, hyperosmotic agents, changes in blood pressure, trauma, ischaemia and tumours.

Most authors present current or very recent work at symposia and the published proceedings are often preliminary communications with the definitive paper to follow. The papers in this volume have all been considerably expanded for publication and include comprehensive references, which add considerably to the value of the book as a source of reference. As in all such publications, the papers are on rather specific and limited aspects of the subject and, as such, should be used as a source of reference on specific points, rather than read as a review of the topic as a whole. Most publications of symposia are of interest only to those who attend it, but this volume will be more widely used as a source of reference by those working in this field and therefore most large medical libraries will require a copy. There is an adequate subject index but, regrettably, no author index.

MD O'BRIEN

Circulatory and Developmental Aspects of Brain Metabolism Edited by Maria Spatz, BB Mrsulja, Lj M Rakic, and WD Lust (pp 426; \$49.50) New York: Plenum Press, 1980.

This volume contains the proceedings of the Second International Symposium on the Pathophysiology of Cerebral Energy Metabolism, held in Belgrade in September 1919. About one-third of the chapters are contributed by the Yugoslavian hosts, while the remaining chapters are supplied by research groups chiefly from the United States and Western Europe. As implied by the title, the book is divided into two topics: one dealing with circulatory aspects of brain metabolism (dominated by chapters on the effects of cerebral ischaemia); the other dealing with developmental aspects of brain metabolism, such as macromolecular composition and turnover, development of structural interactions, and the effect of chemically induced convulsions on cerebral development and function.

Animal models for transient ischaemia (carotid artery occlusion or the use of pressure cuffs) were used by most authors to permit the study of possible post-ischaemic recovery of cerebral blood flow, spontaneous electrical activity, metabolite levels and enzyme activities. The observed post-ischaemic state of hypermetabolism is regarded by several of the authors as an indicator of metabolic damage incurred during ischaemia. KA Hossmann and his co-workers have compared the effect of post-ischaemic administration of barbiturates, hypothermia, and haemodilution in preventing this state of hypermetabolism, and conclude that based on biochemical and electrophysiological recovery, haemodilution offers the best protection. E Westergaard discusses the increased permeability across the blood brain barrier induced by acute hypertension and several authors report on the properties of isolated brain capillaries. The coverage of both topics is restricted to animal experimental studies. The book is probably most useful to scientists doing research in related areas.

AG CHAPMAN

Acta Neurochirurgica Supplementum 30—Advances in Stereotactic and Functional Neurosurgery 4 Edited by FJ

Gillingham, J Gybels, ER Hitchcock, GF Rossi, G Szikla (pp 444; \$1 770, DM 248, \$146.40) New York: Springer Verlag, 1980.

This publication contains over 50 contributions to the Fourth Meeting of the European Society for Stereotactic and Functional Neurosurgery. They review recent progress and trends, mainly in the field of epilepsy and intractable pain. In the former, Rasmussen, Bancaud, and Talairach each writes of his experience and emphasises the value of stereotactically implanted chronic depth electrodes to locate epileptogenic foci, or pathways for the spread of epileptic discharges. Gillingham advocates such studies in cases of intractable grand mal, and reports improvement after placing lesions in the globus pallidus and internal capsule. With recent progress in pharmacological control, it is to be hoped that such procedures will soon no longer be required in the management of "idiopathic" epilepsy; however, every attempt must be made to learn as much as possible concerning the underlying mechanisms during chronic depth electrode electroencephalographic recordings whilst these are still necessary; for the future, some cases of temporal lobe epilepsy and certain localised cortical lesions elsewhere in the hemispheres may be the only indication for surgical treatment.

Reynolds' report 12 years ago of the analgesic effects of periaqueductal grey matter stimulation in the rat, and the discovery of endorphine, has encouraged the search for outside sites for chronic electrical stimulation in the central nervous system for pain. Papers by Hosobuchi and Mundinger are clear and encouraging, and deserve particular mention.

Experiences in chronic cerebellar stimulation are conflicting, and what was first promised to be a useful therapeutic tool, does not seem to have lived up to its early promise.

JOHN ANDREWS

Psychopharmacology of Aging Edited by Carl Eisdorfer and William E Fann (pp 256; £20.50) Lancaster: MTP Press Ltd, 1980.

The pharmacology of the aging brain has become of increasing importance to the drug industry and is beginning to

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spill over into clinical practice. Clearly, with an aging population disorders of mental function associated with normal aging, rather than with dementia itself, may lend themselves to the possibility of improvement by drug treatment. Whether this is a happy state of affairs, or something with profound ethical implications for society as a whole is something which has not yet received the attention it deserves. This relatively small book reviews possible approaches to the pharmacology of aging in animals, and in humans. The human work is related mainly to the unwanted effects of drugs in the elderly with particular regard to drug interactions and to unexpectedly powerful effects in aged people. These chapters in the book are particularly useful. The precise value of experiments of maze-learning behaviour in aged rats to abnormalities of human behaviour in the latter decades of life are rather uncertain, but it is refreshing to see work on suitable subjects for scientific investigation. Several chapters are concerned with biochemical concepts of neurotransmitter action, and of changes in the activity of cyclic-AMP-determined enzyme effects in aged animals and these are less satisfactory, representing rather preliminary work with little relation to clinical practice, or indeed, to changes in drug action in aged animals. It is, perhaps, reassuring to read that "a universal decline in transmitter-receptor interactions appears not to occur in the brain during aging." Nonetheless, it must be admitted that there are changes in intellectual function in some aged people, who are in all other respects normal, without signs of dementia. These aspects of brain function in aging individuals merit further study.

M SWASH

Hormones and the Brain Edited by David de Wied and Pieter A van Keep (pp 325; £16.95) Lancaster: MTP Press Ltd, 1980.

The editors of this volume deserve congratulations and thanks. David de Wied is noted for his highly original studies of the behavioural effects of peptide fragments derived from ACTH, MSH, vasopressin and the endorphins. Pieter van Keep is experienced in endo-

crinology and in the field of medical communication. Together they have produced a workshop-derived volume that can be read from cover to cover with enjoyment. The date of the workshop is not stated but most articles cover the literature up to the end of 1979 and several include papers for the first half of 1980. Of the contributors, 23 work in the USA and 31 work in Europe. None is from the UK.

The first section of the book contains eight chapters on brain receptors for steroids and peptides and the anatomy of peptidergic systems. These papers maintain a broad functional outlook and are accessible to any medical reader. Of the nine chapters on the experimental study of behaviour effects of hormones, six concern peptides and three concern sex hormones. There is a skilful blending of experimental and clinical data concerning addiction and schizophrenia. The remaining 10 chapters are on diverse clinical aspects of the interaction between hormones and psychopathology, including three on affective disorder.

Most interest attaches to the behavioural effects of endogenous peptides, or fragments derived from them, in particular their effects on the acquisition and retention of learned behaviours including addiction. The presentation of the animal work is lucid and stimulating. Lapses into pseudo-explanations are rare. However, the statement "neuropeptides may exert their effects on behavioural adaptation by modulation of ongoing activity in the brain and thus function as neuromodulators" (p 170) is not far in spirit from the classical "morphine owes its sleep-inducing effect to its hypnotic properties." There are no occasional inconsistencies or conflicts between chapters. Thus the statement (on p 106) that diabetes insipidus rats have a serious memory deficit is questioned on page 95. This may be interpreted as a sign of commendable editorial restraint. Indeed the most serious criticism I have of this volume is that six of the chapters should have been longer. Neurologists and psychiatrists will find this book an excellent summary of the most exciting recent work on the role of hormones and peptides in normal and pathological behaviour.

BS MELDRUM

Current Status of Modern Therapy Vol 6. The Therapy of Pain Edited by Mark Swerdlow (pp 250; £16.95) Lancaster: MTP Press, 1981.

Edited by a renowned practitioner in the field of pain relief, this book comprises nine chapters, each chapter covering various aspects of the subject in different ways and to differing standards. For this reviewer, three contributions stand out as being particularly valuable. That on nerve blocks (AS Brown) is excellent, and a model of detailed and critical assessment, in particular when dealing with the results and especially the hazards of many neurolytic procedures. All concerned should be familiar with these hazards, which have resulted in a search for alternative and safer procedures. The displacement of chemical neurolysis by thermocoagulation procedures in many centres is well illustrated in the following chapter devoted to the role of neurosurgery for pain relief (E Hitchcock). The profusion of techniques discussed in this interesting and useful contribution indicates the dilemma of exactly what is the best procedure to advise for the patient. The account of management of pain in cancer patients (RD Hunter) has six of its pages devoted to a helpful discussion on diagnostic techniques, which adds to a most worthwhile and realistic consideration of what the radiotherapist and oncologist have to offer. These three chapters are very informative and outweigh the more conventional treatment given, admittedly by distinguished authorities in their fields, to pharmacological management (NE Williams), psychiatric management (I Pilowsky), non-invasive methods (M Mehta) and terminal care (C Saunders). Whether yet another chapter on management of a pain relief centre (S Lipton) is justified must remain a matter of opinion. The least satisfactory chapter is that on the neurological aspects of pain therapy (BD Wyke). Particularly disappointing are that its thirty pages are entirely devoid of detailed references in the text, that in this volume on the therapy of pain there is no reference to the fact that much of the material is based on animal work, and that the endogenous opiate-like substances are barely considered.

In essence, this is a book of patchy