

Books Received

CELL TRANSPLANTATION FOR NEUROLOGICAL DISORDERS. 1998. Edited by Thomas B. Freeman, Hakan Widner. Published by Humana Press. 368 pages. \$C195.75 approx.

DISEASES OF THE NERVOUS SYSTEM IN CHILDHOOD. 1998. By Jean Aicardi. Published by Cambridge University Press. 897 pages. \$C351.00 approx.

EFFECTIVE NEUROSCIENCE. THE FOUNDATIONS OF HUMAN AND ANIMAL EMOTIONS. 1998. By Jaak Panksepp. Published by Oxford University Press Canada. 466 pages. \$C105.00 approx.

IMMUNOLOGICAL AND EFFECTIOUS DISEASES OF THE PERIPHERAL NERVES. 1998. Edited by N. Latov, J.H.J. Wokke, J.J. Kelly, Jr. Published by Cambridge University Press. 435 pages. \$C188.50 approx.

INTRODUCTION TO THE BLOOD-BRAIN BARRIER. METHODOLOGY, BIOLOGY AND PATHOLOGY. 1998. Edited by William M. Pardridge. Published by Cambridge University Press. 486 pages. \$C175.50 approx.

NEUROLOGY AND THE LAW: PRIVATE LITIGATION AND PUBLIC POLICY. CONTEMPORARY NEUROLOGY SERIES. 1998. Edited by H. Richard Beresford. Published by Oxford University Press Canada. 188 pages. \$C133.50 approx.

PATHOLOGY AND GENETICS. TUMOURS OF THE NERVOUS SYSTEM. 1997. Edited by Paul Kleihues, Webster K. Cavenee. Published by Oxford University Press Canada. 255 pages. \$C137.95 approx.

SPINAL CORD DISEASES. NEUROLOGICAL DISEASE AND THERAPY SERIES-VOLUME 47. 1998. Edited by Gordon L. Engler, Jonathan Cole, W. Louis Merton. Published by Marcel Dekker. 696 pages. \$C263.25 approx.

THE CNS IN ACTION: THE OLFACTORY SYSTEM CD ROM #3. 1998. By Jean-Marie Peyronnard, Louise Charron. Published by SSB Multimedia Health Services. \$C123.50 approx.

THE PREFRONTAL CORTEX. EXECUTIVE AND COGNITIVE FUNCTIONS. 1998. By A.C. Roberts, T.W. Robbins, L. Weiskrantz. Published by Oxford University Press Canada. 248 pages. \$C62.50 approx.

Book Reviews

THE CENTRAL NERVOUS SYSTEM – STRUCTURE AND FUNCTIONS. 1998. 2nd Edition. By Per Brodal. Published by Oxford University Press. 675 pages. \$C71.50 approx.

In this the second edition of his volume on the central nervous system, Per Brodal has risen to the challenge of explaining an increasingly complex topic by a synthesis of style and format that immediately engages even the first time reader, and facilitates understanding. Examples are as follows: i.) the text is developed within the contextual frameworks of normal and abnormal neurological function; ii.) the text builds on its contextual frameworks of function and dysfunction by emphasizing neural networks and neural connectivity; iii.) the text whets the appetite of those interested in the nervous system by highlighting areas of controversy and lack of knowledge, and by delving more deeply into certain areas by a format that does not distract or disengage the reader; iv.) the text does not overwhelm because it is set up for selective perusal, and uses succinct declarative sub-headings to focus attention by means of summary; v.) the bibliography is organized to match chapter and section content. This feature is a useful aid to students, tutors and facilitators to promote more in-depth literature perusal; vi.) photomicrographs and drawings are of high quality and clearly complement the text to facilitate learning.

This text belongs in the curriculum of students beginning studies in the health sciences disciplines. The author has been faithful to the Brodal tradition of bridging the gap between basic and clinical neurosciences by relating structure at all levels of the nervous system (molecular, cellular, systems) to its functions.

*R.J. Riopelle,
Kingston, Ontario*

RIGHT HEMISPHERE LANGUAGE COMPREHENSION. 1998. Edited by Mark Beeman, Christine Chiarello. Published by Lawrence Erlbaum Associates, Inc. 408 pages. \$C51.94 approx.

This edited book on right hemisphere language concentrates on comprehension from phonology to pragmatics. It is a multi-disciplinary effort with most of the contributions being linguists and psychologists but also a few neurologists and neuroscientists researching anatomy. Right hemisphere language capacity has been much debated. This is not a trivial topic from the point of view of neurobiology and psycholinguistics or even clinical neurology, although clinical issues are not prominent in this book. For instance, there is a chapter on right hemisphere contributions to creative problem-solving but not on recovery from aphasia. There is no chapter on PET scanning or fMRI that have thrown some light on right hemisphere language function, but there is a chapter in the book on event related potentials and some computer modeling of the semantic space that challenges the comprehension of non technical readers. Particularly interesting are the chapters that make an attempt at integrating hemispheric processing of language. There is no doubt that language deficits are subtle with right hemisphere damage but the evidence for right hemisphere participation in language processing is indeed extensive and some of this is highlighted and updated in this book.

Language comprehension is a complex phenomenon requiring phonological processing, the recognition of lexical units and their integration into meaning, the use of syntax (which the right hemisphere by the way seems incapable of doing). The processing of paralinguistic or pragmatic aspects of language such as humor, context and other highly integrated functions, on the other hand, may

be even specialized in the right hemisphere. Most of the chapters have a healthy mixture of theory and experimental data but the book is more than just a collection of articles. The editors should be commended for the selection of high level work, and for their effort to integrate it with an excellent introduction, comments on each section and summary. This is an enjoyable and current text in an important area, which can be read by the novice and expert alike. It provides useful references in addition to serving as an important educational resource.

A. Kertesz,
London, Ontario

PHYSIOLOGY OF ALS AND RELATED DISEASES. 1st Edition. 1997. By Jun Kimura and Ryuji Kaji. Published by Elsevier Science BV. 230 pages. \$C138.13.

This book covers both the clinical and physiological aspects of Motor Neuron Disease and related disorders. There is a wide range of styles and the information provided for each entity varies. The book is well written, in general, and addresses issues not dealt with in current texts on the subjects. Chapters 2 and 3 emphasize the basic physiology of the peripheral nerve and motor neuron as it applies to electrodiagnostic testing. Two conditions are emphasized: multifocal motor conduction block and amyotrophic lateral sclerosis.

Chapters 4-7 as well as chapter 19 discuss multifocal motor conduction block and the potential variants in detail. Both clinical and electrophysiological aspects are well covered.

Chapters 8 and 9 discuss postpolio syndrome and acute motor axonal neuropathy, (AMAN) respectively. AMAN is approached as a clinical entity rather than a review, covering most points effectively.

The remaining chapters are devoted to ALS. Appropriately, the majority of the work emphasizes the electrophysiology found in motor neuron disease. However, clinical trial issues including motor unit estimates and natural history information are included.

The strength of this text is the breath of electrophysiology covered by different authors. This would be most useful for those who are involved in electromyography and well as for non-EMGers who have an interest in neuromuscular diseases. It is an important addition to an EMG library.

Angela Genge,
Montreal, Canada

RADIOSURGERY. 1998. Edited by D. Kondziolka. Published by Karger. 268 pages. \$C292.00 approx.

This book is a collection of papers presented at the 3rd International Stereotactic Radiosurgery Society Meeting held in Madrid in June 1997. As such, it is not a definite treatise on the state of the art in this field.

The papers are grouped into 6 sections: benign tumours, malignant tumours, vascular malformations, functional disorders, radiobiology, and technology and techniques. Each section contains a variable collection of papers, some of which are large in their scope and review the area in depth, and others of which are very narrow in their scope and deal with the use of radiosurgery in very uncommon conditions in a small number of patients. The section on benign tumours contains an excellent discussion of the evolution and increasing indications for the use of radiosurgery in the primary

management for acoustic neuromas, as well as the use of radiosurgery for trigeminal neurinomas. The section on malignant tumours includes an excellent paper which comprehensively reviews the role of radiosurgery in patients with brain metastases. Several subsequent papers deal with the issue of whether whole brain irradiation is required in the subset of patients with solitary brain metastases. This section is completed with a few institutional experiences with radiosurgery in the management of glioblastoma, uveal melanoma, and nasopharyngeal carcinoma.

There are 4 papers in the vascular malformation section dealing with the histopathologic changes following radiosurgery, a grading scale that might be predictive of outcome with radiosurgery, the issue of sub-clinical hemorrhage post-radiosurgery, and a large multi-institutional experience with radiosurgery. The last 3 sections have a limited number of papers on a variety of topics.

Overall, this book is a good source of information on highly specialized aspects of the current state of the art of radiosurgery. It contains several excellent review papers which would give the reader not familiar with this area some perspective on the field. However, most papers deal with some highly specialized aspect of radiosurgery, and as such would be more suitable as a reference to individuals involved in radiosurgery. The field of radiosurgery and stereotactic radiation therapy is a rapidly evolving clinical and technological enterprise, and this book represents a good collection of papers contributing to the growing body of knowledge in this area.

N.J. Laperriere,
Toronto, Ontario

NITRIC OXIDE IN HEALTH AND DISEASE. 1997. Edited by: Jill Lincoln, Charles H.V. Hoyle and Geoffrey Burnstock. Published by Cambridge University Press. 363 pages. \$C51.94 approx.

It is just over 10 years that the small, unstable, rapidly diffusible nitric oxide radical (NO) was found to be synthesized by mammalian cells. It acts as a physiological messenger in the brain and vascular system, and as a cytotoxic agent of immune and inflammatory cells. Over 11,000 papers on NO have appeared since 1987, and this number is increasing rapidly. While writing this review, NO has been shown to regulate the cyclic guanosine monophosphate (cGMP) levels in the developing retinotopic connections between the photoreceptors in the optic lobe of *Drosophila melanogaster*. Furthermore, the popular magazine press has discovered NO, recently reporting the release of the new oral drug Viagra, a cGMP phosphodiesterase inhibitor, for the treatment of male impotence. NO is in fact the trigger for cGMP formation by penile erectile tissue. This book has attempted to cover complex and controversial issues of the biology and pathobiology of NO in one volume. In this the authors have been most successful. It is a clearly written account that will be most helpful to postgraduate and post-doctoral researchers just beginning research on NO, and to clinicians interested in this new subject. This book reviews the role of NO in the central and peripheral nervous system, the cardiovascular system, and the immune system, and is divided into four sections. Section 1, with six chapters, provides insightful historical background as well as covers the basic biochemistry and biology of nitric oxide. It is fascinating how the discovery of NO synthase helps to shed light on a number of issues including: the identification of endothelium relaxing factor (EDRF); how nitroglycerin and other organic nitrates work as prodrugs which are biodegraded to