

**BOOKS RECEIVED**

**NEUROSONOLOGY AND NEUROIMAGING OF STROKE.** 2008. By José M. Valdueza, Stephan J. Schreiber, Jens-Eric Roehl, Randolf Klingebiel. Published by Thieme. 399 pages. C\$180 approx.

**ATLAS OF SKULL BASE SURGERY AND NEUROLOGY. SECOND EDITION.** 2008. By Robert K. Jackler. Published by Thieme. 280 pages. C\$200 approx.

**ENDOSCOPIC SURGERY OF THE PARANASAL SINUSES AND ANTERIOR SKULL BASE. SECOND EDITION.** 2008. By Malte Erik Wigand. Published by Thieme. 237 pages. C\$140 approx.

**AUDITORY PERCEPTION. AN ANALYSIS AND SYNTHESIS. THIRD EDITION.** 2008. By Richard M. Warren. Published by Cambridge University Press. 264 pages. C\$60 approx.

**AN INTRODUCTION TO THE VISUAL SYSTEM. SECOND EDITION.** 2008. By Martin J. Tovée. Published by Cambridge University Press. 212 pages. C\$50 approx.

**FUNDAMENTALS OF MUSCULOSKELETAL PAIN.** 2008. Edited by Thomas Graven-Nielsen, Lars Arendt-Nielsen, Siegfried Mense. Published by IASP Press (International Association for the Study of Pain). 496 pages. C\$90 approx.

**BOOKS REVIEWED**

**NEURO-ONCOLOGY. THE ESSENTIALS. SECOND EDITION.** 2007. By Mark Bernstein, Mitchel S. Berger. Published by Thieme Medical Publishers. 496 pages. Price C\$170.

The textbook of Neuro-oncology covers the biology, evaluation and treatment of patients with primary and metastatic brain tumours.

The treatment sections cover surgery, radiation therapy, chemotherapy and biological therapy, including immune therapy, gene therapy and small-molecule-based therapies. There is a chapter devoted to specific tumours. There is also a chapter concerning related issues including complications of medical therapy, quality of life and ethical concerns for Neuro-oncology patients. This text does not cover paraneoplastic syndromes or other neurological complications of malignancy.

One very useful feature of this book is the use of highlighted text boxes to emphasize important points. The boxes entitled "Pearl," "Pitfall," "Special Consideration" and "Controversy" are particularly valuable because they highlight topics that are of particular concern for clinicians and also because these important points can be found easily without the necessity to read the detailed text. In the same way, multiple headings and subheadings make it easy to navigate through the various chapters to find specific information. I question the use of the colour red for the text boxes and subheadings, particularly the white on red titles, and wonder if another colour might be easier to see, especially for those with colour blindness.

The chapters concerning anatomic imaging, metabolic imaging, physiological imaging and function imaging in the Evaluation section are particularly well written, with clear explanations of these topics suitable for those who are not imaging specialists but who wish to learn more about how various imaging modalities can aid

diagnosis and treatment. There are clear explanations of some of the newer variants of MRI with good illustrations. The pictures of the same patient imaged using several different techniques are particularly helpful for gaining understanding of the role of these modalities in patient management and research.

At the beginning of the Chemotherapy section, there is a brief, but excellent discussion of clinical trials for brain tumour patients. In spite of the fact that this section is included in the chemotherapy section, there is little discussion of chemotherapy trials. Rather, the section discusses end points for clinical trials of biologic agents and the difficulties of using MRI scans to assess response, including response to brachytherapy or radiosurgery. There are no similar sections in the surgery or radiation therapy chapters. In my opinion, it would be preferable to have a completely separate section in the book for a discussion of clinical trials in brain tumour patients. I would suggest that in future editions of the book this section could discuss the particular problems of designing phase I, II and III clinical trials of surgery, radiation therapy, chemotherapy and newer modalities of therapy for brain tumour patients. This section would contain a discussion of the difficulties of determination of end points in brain tumour trials and include cross references to the excellent chapter on imaging mentioned above as well as to the chapters concerning therapy. This new chapter could also refer to some excellent examples of brain tumour clinical trials for review by residents and those who are inexperienced in planning such trials. Quality of life issues and ethical considerations would be an important part of this chapter. Such a section would be particularly valuable for Neuro-oncology, Radiation Oncology and Medical Oncology residents.

The section on specific tumours includes detailed discussion of the epidemiology, prognostic factors, characteristic clinical features,

investigation, treatment and prognosis of specific tumours including low grade gliomas, pituitary tumours, meningiomas and primary central nervous system lymphomas, among others. Where there is no recognized treatment for a particular type of tumour, the authors suggest an approach to treatment. This section is well illustrated and replete with highlighted boxes, particularly boxes containing "Special Considerations" pertaining to the tumour under discussion.

Although there is clearly great potential for overlap between the general chapters concerning surgery, radiotherapy, etc and the chapters concerning specific tumours, the authors have done an excellent job of limiting this overlap by confining detailed discussions of each topic to the general chapters and mentioning only those details pertaining to specific tumours in the chapters concerning specific tumours. In my opinion the book could be improved in future editions by including more cross-references between the general and specific chapters to better integrate the theoretical material with the clinical material.

In general the text is well illustrated with examples of MRI images and diagrams. Each chapter includes a comprehensive list of the most important references for those who would like to explore the material in greater depth.

In summary, I would highly recommend this textbook of Neuro-oncology as an excellent reference for residents in Neurology, Neurosurgery, Radiation Oncology or Medical Oncology and for practicing physicians for whom Neuro-oncology is not their primary focus or area of specialty.

*Dorcus Fulton  
Edmonton, Alberta, Canada*

**TOPICS IN INTEGRATIVE NEUROSCIENCE FROM CELLS TO COGNITION.** 2008. Edited by James R. Pomerantz. Published by Cambridge University Press. 427 pages. Price C\$140.

The goal of this 427-page book is to discuss four important problems in neuroscience in terms of recent discoveries and advances. The book has chosen, as chapter authors, researchers who are well recognized and accomplished in the specific fields.

Patricia Churchland, a Canadian-American philosopher who has focused on the interface between neuroscience and philosophy, writes the first chapter. She is associated with a school of thought called "eliminative materialism" which argues that folk psychology concepts such as belief, free will and consciousness will likely need to be revised as science understands more about the nature of brain function. Her recent work focuses on neuroethics, which makes for an interesting and though provoking introductory chapter entitled "Neuroscience, choice and responsibility".

The first section addressing higher order perception, predominantly related to the visual system, includes three chapters. The section begins with an overview followed by chapters on attention, visual perception and visual special attention. The three chapters provide different levels of analysis that are closely related to the methods used by the authors. The first chapter deals primarily with imaging, cellular, and genetic mechanisms as they relate to behavior. The second chapter discusses inter-cellular communication related to visual input. The third concentrates on the

imaging of the human brain in visual perception to develop links to cellular levels.

The second section discussing language includes an introduction and four chapters. The introductory overview is followed by the first chapter which deals with plasticity, the second which addresses the functional architecture of speech perception; the third discusses the impact of neuro-degenerative disease on language and the last presents data on why language is unique to humans. The first chapter provides a developmental perspective on the relative roles of intrinsic constraints and the role of experience in the differentiation of the language systems. The second chapter describes the neural and functional architecture of speech perception. The third chapter discusses the impact of neuro-degenerative diseases on language with a particular focus on neuro-imaging. The last chapter addresses the question of how the language systems are acquired by the young infant by combining behavioral and imaging techniques.

The third section addresses memory and includes an introduction and four chapters. The overview is followed by the first chapter discussing memory systems, the second chapter describing declarative memory, the third reviewing the role of the amygdala in auditory fear conditioning and the fourth discussing the roles of the hippocampal NMDA receptors in acquisition and recall of associative memory. The section considers the anatomy and animal of declarative memory and the structural organization of non-declarative memory. The last chapter in the section focuses on molecular basis of memory in the mouse model and specific roles of specific subunits within the NMDA receptor.

The final section discusses sensory processing and includes an introduction and two chapters. The overview is followed by a chapter discussing song selectivity in songbirds and a chapter discussing the role of voltage-dependent sodium currents in hair cells of the inner ear.

Overall this is a well-written, organized and thought-out book. The target audience for the book would include basic neuroscientist and trainees and neurologist or neurosurgeons interested in or involved in the study of vision, language and cognition.

*Lorie D. Hamiwka  
Boston, Massachusetts, USA*

**NEUROPATHOLOGY REVIEW. SECOND EDITION.** 2008. By Richard Prayson. Published by Humana Press. 252 pages. Price C\$90.

With the advent of improved imaging techniques and sophisticated diagnostic tests, neuropathology receives less attention in training new residents than in years past. For example, while biopsy was required for many years in order to diagnose herpes encephalitis, molecular diagnostics have made this practice obsolete. Nonetheless, a thorough understanding of neurologic disease is not possible without adequate training in neuropathology, and many illnesses still depend on pathologic description for diagnosis. It is therefore of some concern that many neurology and neurosurgery residents will have little to no exposure to the brain cutting sessions of the recent past, and less hands on experience as medical school class sizes continue to grow. These trainees are therefore at the