Books Received

ADVANCES IN NEUROLOGY – VOLUME 58. TOURETTE SYNDROME: GENETICS, NEUROBIOLOGY AND TREATMENT. 1992. Edited by T.N. Chase, A.J. Friedhoff, D.J. Cohen. Published by Raven Press. 399 pages. $138 Cdn.

ADVANCES IN NEUROLOGY – VOLUME 59. (NEURAL INJURY AND REGENERATION). 1992. Edited by Fredrick J. Seil. Published by Raven Press. 384 pages. $132 Cdn.

CEREBRAL DYSGENESIS: EMBRYOLOGY AND CLINICAL EXPRESSION. 1992. By Harvey B. Sarnat. Published by Oxford University Press Canada. 473 pages. $105 Cdn.

CONDUCTION APHASIA. 1992. Edited by Susan E. Kohn. Published by Lawrence Erlbaum Associates, Inc., Publishers. 167 pages. $54 Cdn.

DEMENTIA. 1992. Edited by Peter J. Whitehouse. Published by F.A. Davis Company. 465 pages. $108 Cdn.

DISEASES OF THE SPINAL CORD. 1992. Edited by Edmund Critchley and Andrew Eisen. Published by Springer-Verlag. 453 pages. $190 Cdn.

EPILEPTIC SYNDROMES IN INFANCY, CHILDHOOD AND ADOLESCENCE, SECOND EDITION. 1992. Edited by J. Roger, M. Bureau, C. Dravet, F.E. Dreifuss, A. Perret and P. Wolf. Published by John Libbey. 418 pages. $61.20 Cdn.

FROM NEURON TO BRAIN – THIRD EDITION. A CELLULAR AND MOLECULAR APPROACH TO THE FUNCTION OF THE NERVOUS SYSTEM. 1992. By J.G. Nicholls, A.R. Martin and B.G. Wallace. Published by Sinauer Associates, Inc. 807 pages. $57 Cdn.

IMAGING OF THE SPINE AND SPINAL CORD. 1992. Edited by Claude Manelfe. Published by Raven Press. 910 pages. $204 Cdn.

LUMBAR DISC DISEASE – SECOND EDITION. 1992. Edited by Russell W. Hardy, Jr. Published by Raven Press. 373 pages. $150 Cdn.

MOLECULAR AND CELLULAR APPROACHES TO THE TREATMENT OF NEUROLOGICAL DISEASE (RESEARCH PUBLICATION, VOLUME 71). 1992. Edited by Stephen G. Waxman. Published by Raven Press. 415 pages. $168 Cdn.

NEUROREGENERATION. 1992. Edited by Alfredo Gorio. Published by Raven Press. 345 pages. $144 Cdn.

OCCUPATIONAL MUSCULOSKELETAL DISORDERS. 1992. By Nortin M. Hadler. Published by Raven Press. 287 pages. $84 Cdn.

PSYCHONEURO-IMMUNOLOGY. 1992. Edited by H-J. Schmoll and U. Tewes. Published by Hogrefe and Huber. 276 pages. $40.80 Cdn.

SURGERY OF CRANIAL BASE TUMORS. 1992. Edited by Laligram N. Sekhar and Ivo P. Janecka. Published by Raven Press. 892 pages. $270 Cdn.

SURGERY OF THE EAR AND TEMPORAL BONE. 1992. Edited by Joseph B. Nadol, Jr. and Harold F. Schuknecht. Published by Raven Press. 494 pages. $198 Cdn.

TARDIVE DYSKINESIA. 1992. By H. Haag, E. Rüther and H. Hippius. Published by Hogrefe and Huber. 128 pages. $34.80 Cdn.

VESTIBULAR AND BRAIN STEM CONTROL OF EYE, HEAD AND BODY MOVEMENTS. 1992. Edited by Hiroshi Shimazu and Yoshikazu Shinodo. Published by S. Karger AG, Basel. 466 pages. $316.80 Cdn.

WOMEN AND EPILEPSY. 1991. Edited by M.R. Trimble. Published by John Wiley & Sons, Inc. 285 pages.

Book Reviews

BASIC NEUROSCIENCE: ANATOMY AND PHYSIOLOGY. Second Edition, 1991. By Arthur C. Guyton. Published by W B Saunders Co, Philadelphia. 432 pages. $56.25 Cdn.

This book attempts to present both neuroanatomy and neurophysiology in one volume in an integrated fashion. In addition, a strong effort has been made to keep the size of the book manageable for the average student, including the medical student.

The book does largely achieve these goals. The first section deals with gross nervous system anatomy in approximately 50 pages. This is followed by a short section on ion channels and membrane potentials. Much more extensive sections then follow on the sensory and motor system and integrative neurophysiology including the limbic and autonomic nervous systems. The final section deals with muscle and the neuromuscular junction, and the nervous regulation of a number of body functions including the circulatory, respiratory, gastrointestinal and endocrine systems.

The total length of this book is manageable at just under 400 pages. It is far more physiological than anatomical. The reader will be hard pressed for example to find the anatomy of the middle cerebral artery, but will find good sections on cerebral blood flow autoregulation.

As the name implies, this book deals with basic neuroscience, with only very brief forays into the clinical neurosciences and the pathophysiology of disease. These forays are not always successful or up to date. For example, in the short section on the pathophysiology of migraine, no mention is made

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of the potential role of peptide release from afferent nerve terminals in cerebral blood vessels. The section on headache also gives the impression that constipation is a major clinical cause of headache. The book also makes some peculiar statements. For example, in the section on smell sensation, it is stated that "perfume of the right quality can wreak havoc with masculine emotions". No specific reference is given for this statement. All in all, however, this book does live up to its objectives and title. It provides a very useful synthesis of anatomy and physiology in a book of manageable size. Medical school neuroscience course directors should consider it for their courses, but should also ensure that adequate additional reference material which deals with the pathophysiology and clinical features of neurologic disease is available.

W.J. Becker
Calgary, Alberta

NEUROSURGICAL CLASSICS. 1992. 2nd Reprint. Edited by Robert H. Wilkins, M.D. Published by the American Association of Neurological Surgeons. 523 pages. Price unknown.

In 1965 Robert Wilkins produced the first printing of his *Neurosurgical Classics* which for many years has become unavailable. This second printing (not a second edition) will be welcomed by the two generations of neurosurgeons who have grown up since the book's first appearance.

Fifty-two articles are reproduced in their original form complete with illustrations. The inclusions are grouped under neurosurgery in antiquity (two articles), basic experimental and clinical investigations, diagnostic procedures and techniques, surgical procedures and techniques — basic, craniocerebral and spinal.

The selection is limited to articles published before 1940. In 1965, when the volume first appeared, many of them were still relevant to the practice of neurosurgery. Today they are no less important because of their historical rather than practical interest.

Like any anthology, this bears the signs of the compiler's personal preferences, but no doubt the choice of contents will stimulate readers to indulge their own bias by applauding inclusions and deploring omissions. The selections, all the same, are well chosen and are necessary reading for thoughtful present day practitioners and investigators. Wilkins introduces each topic with a valuable appraisal of its historical place in the progress of neurosurgery. *Neurosurgical Classics* is one contribution to the neurosurgical literature that will never grow out of date. We look forward to a promised sister volume of "classics" which appeared after 1940.

T.P. Morley
Toronto, Ontario

ADVANCES IN NEUROLOGY, VOLUME 57, FRONTAL LOBE SEIZURES AND EPILEPSIES. 1992. Edited by Patrick Chauvel, Antonio V. Delgado-Escueta, Eric Halgren and Jean Bancaud. Published by Raven Press, New York. 750 pages. $114 Cdn. approx.

In his preface, Dr. Delgado-Escueta appropriately states that a major challenge is to apply current knowledge and technology to frontal lobe seizures and epilepsies.

Compared to the formidable problems that patients with frontal lobe epilepsy present to the clinical and basic neuroscientist, the data presented in this volume indicate that such advances have taken us little beyond the principles outlined by Penfield and Jasper many years ago.

Many of the clinical chapters are redundant. Contributions by Dreifuss and Williamson, each could have been expanded to encompass several others and used as opening chapters. The decision point system of seizure localization outlined clearly by Broglin et al. may help some readers but I found it excessively coercive and simplistic.

There are a number well written, informative chapters. The following are comments on some of these. Wiesendanger and Wise present a well organized, easy to read, well illustrated chapter on the functional organization of motor cortical areas and particularly of the non-primary motor areas. This includes a thorough discussion on the rationale for hierarchical and parallel organization of primary and non-primary motor regions. The value of this volume would have been further enhanced by a general introductory chapter by these authors on the motor system as manifested on clinical aspects of motor seizures. Schlag and Schlag-Rey present a useful discussion on the cortical role in ocular movements. Lüders and associates outline an interesting clinical-neurophysiological study on negative motor responses in humans to electrical stimulation of focal cortical points via subdural electrodes. Munari and Bancaud present an interesting hypothesis about the genesis of seizures arising from the orbital frontal cortex for SEEG data. Williamson contributes a sobering chapter on the problems associated with localizing of origin in frontal lobe seizures. This chapter would have been even more valuable if placed earlier in the book. The chapters by Porter, Meldrum and Mattson on antiepileptic drug therapy for partial seizures each has its own set of valuable contributions.

The chapters devoted to the basic science aspects of frontal lobe seizures present high quality data, but in many instances the writing seems directed to other basic scientists and not to the practicing clinician. Co-authorship of such chapters by a clinician with background in the basic science area would have enhanced considerably their value. Among other chapters, this applies to those by 1) Barbas on architecture and cortical connections of the pre-frontal cortex, whose diagrams could have been improved, 2) Fuster on pre-frontal neurones and cognitive foundation of motor action, and 3) Berger on the dopaminergic innervation of the frontal cerebral cortex. Apparently little is known about kindling of the frontal cortex as only a single paragraph in the contribution of McNamara et al. referred to the frontal lobe.

The data on some chapters, such as that by Buser et al. on callosal transfer and Grafman et al. on penetrating head injuries contain data obtained with outdated technologies. The former almost totally ignores major physiological contributions to our knowledge of corpus callosum function.

In contrast to Delgado-Escueta's assertion in the preface that clinical epileptologists should have expertise in positron emission tomography, the section on this subject shows how little PET has contributed to clinical decisions even though this investigation has neurobiological interest. Swartz et al. present a critical review of its clinical advantage and limitations while Henry et al. present a comprehensive overview of its principles.