

**DUCHENNE MUSCULAR DYSTROPHY. ANIMAL MODELS AND GENETIC MANIPULATION.** 1992. Edited by B.A. Kakulas, J. Howell and A.D. Roses. Published by Raven Press. 308 pages. \$108 Cdn. approx.

In August of 1991, the University of Western Australia hosted a meeting of scientists with a common interest in dystrophin and its relationship to human and animal disease. This volume contains the presentations and discussions from this meeting. It follows a popular trend and, as with all such books, there are both advantages and disadvantages to this approach. It gathers together in one place much of the seminal work leading up to the time of the conference. It presents a convenient summary and a ready source of references for anyone wishing to find the original articles without resorting to an exhausting library search. So rapidly is research in this area moving, that many of the chapters are slightly out of date even one year later.

The book is divided into three sections. The first deals with dystrophin, its abnormalities and properties in animal and human. There are nice reviews of past work. Dr. Roses makes an eloquent plea for supporting the canine model of dystrophy and it is good to see the photographs of that odd marsupial, the Quokka, again. Much of the information on dystrophin is well known, but there are complete descriptions of the abnormalities in golden retriever muscular dystrophy from Bartlett, Sharp, Komegay and others.

The second section is entitled myoblast transfer. This provides the reader with an excellent overview of the procedure, from the initial optimism about its use in Duchenne dystrophy to the consensus, developed at the conference and shared by many, that it is time to return to the animal model. Both Karpati and Partridge have thoughtful reviews on the topic. Various aspects of the technique are presented including factors which may influence cell fusion and regeneration as well as markers which may be used in determining whether the donor cells actually reached their target.

The third section discusses gene therapy. In many ways this is the more exciting part of the book. Klamut reports on the work with the Duchenne "minigene" and their group's success in expressing a modified dystrophin in tissue culture. Bartlett describes some alternative methods of delivering DNA into cells including an apparatus called the biolytic wand, which should intrigue the clinician who may be dealing with these techniques in the next century.

In short, this is a nice volume. It will serve as a time capsule of the state of things in 1991. The audience who will appreciate it most (apart from the participants) are those clinicians working in the field of neuromuscular disease who sense themselves adrift in a sea of basic science. This book will provide an anchor, although, alas, a temporary one.

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**MANTER AND GATZ'S ESSENTIALS OF CLINICAL NEUROANATOMY AND NEUROPHYSIOLOGY.** 8th Edition. 1992. By Sid Gilman and Sarah Winans Newman. Published by F.A. Davis Company, Philadelphia. 328 pages. \$26 Cdn. approx.

The first time I encountered *Manter and Gatz's Essentials of Clinical Neuroanatomy and Neurophysiology* was in 1971 – it was in its 4th edition and I was a second year medical student struggling to learn neuroanatomy in the Neuroscience Course at the University

of Western Ontario. Now, in 1992, *Manter and Gatz* is in its 8th edition, I am the manager of that same course, and *Manter and Gatz* is still one of the supplementary texts that we recommend to our students.

Gilman and Newman have organized the text into seven sections. They begin with *Basic Principles*, in which there is an introduction to neurohistology, embryology of the nervous system and some general neurophysiology and they then go on to *The Peripheral Nervous System*. This is followed by an overview of the central nervous system (CNS) in *Ascending and Descending Pathways* before they deal with the CNS in a regional fashion in sections entitled *Brain Stem and Cerebellum*, *Higher Levels of the Nervous System*, and *Circulation of Blood and Cerebrospinal Fluid*. Finally, they end with a section on *Approaches to Patients with Neurologic Symptoms*.

The edition with which I was familiar as a student, was more functional neuroanatomy than true neurophysiology, and the present edition continues that trend. While the amount of neurophysiology in the text is not considered adequate, by our standards, to be used as the sole text for our Neuroscience Course, the amount of neuroanatomy certainly is. The book has numerous, very clear, two- and three-dimensional diagrams that compliment the text. Unfortunately, there is only one horizontal brain slice that would allow the student to correlate neuroanatomical structures with those seen on CT and MR imaging.

The chapter on the clinical examination of the patient is new to this edition and is a reasonable overview of the subject; however, it is not accompanied by any diagrams showing examination technique and certainly would not be a substitute for a good textbook of physical diagnosis. The final chapter introduces the student, in broad-brush fashion, to various diagnostic modalities used by neurologists and neurosurgeons.

*Manter and Gatz* is not the place to look up information on the interstitial nucleus of Cajal, the nucleus of Darkschewitsch or other neuroanatomical minutiae; however, it does provide an excellent overview of human neuroanatomy. Drs. Gilman and Newman, in their preface to the eighth edition, indicate that they prepared this text for the beginning student and for residents in neurology, neurosurgery, psychiatry, and physical medicine and rehabilitation who wish to review, in a comprehensive fashion, a clinically-oriented approach to neuroanatomy. In this, I believe they have succeeded admirably. For medical students who wonder if it is worth the investment, all I can say is, "Look what it did for me!"

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**NEUROANATOMY, BASIC AND CLINICAL.** Second Edition. 1992. Edited by M.J.T. Fitzgerald. Published by Baillière Tindall. 252 pages. \$20 Cdn. approx.

This soft cover second edition is a major revision of the first edition published in 1985. The changes made have improved the book considerably and the author has achieved his goal of creating a very good text for undergraduate medical students, while still being a useful reference for residents in training.

The text has been shortened somewhat, by deleting some of the material which had little clinical relevance. However, nothing of importance seems to have been lost, and if anything the text is a

better learning resource as the important and essential facts and concepts all seem to be there and are not buried in a wealth of detail. Reference lists in each chapter have been condensed and made current. The text seems to be less fragmented by consolidating topics together into 26 chapters instead of 41, and the chapter order has been changed to present a fairly logical flow from the periphery to the cerebrum via cord and brainstem, with the cranial nerves discussed with the appropriate level of the brainstem. Two new introductory chapters have been added, on embryogenesis and general topographical anatomy, which provide a good overview of where things are and a concise explanation of why they are where they are.

The diagrams have been improved considerably in that there are fewer of them and they are simpler, clearer and cleaner than their predecessors, so that the points they make are much easier to follow and understand. Many new photographs have been added, including MRI's, CT scans, gross anatomical views and cross-sections at various levels. These are a welcome and useful addition, but it is unfortunate that many of them are quite dark, and it is sometimes difficult to trace the black label lines through the dark or even black areas to the structures to which they refer.

The writing style is quite concise, perhaps too much so at times, requiring close attention to the text in order not to lose the thread of the argument. However, readability is improved considerably by the effective use of bold and italic fonts highlighting important points and names.

The book is quite successful at marrying the structural anatomy with the functional, and the basic with the clinical. The discussions of functional anatomy are complete, up to date and reasonably easy to understand, with good descriptions of the appropriate physiology and biochemistry. The many highly relevant "Clinical Panels" found in all the chapters review common or important clinical situations and bridge the gap between classroom and bedside in excellent fashion.

The stated goal for this text is to appeal to medical undergraduates. In this I feel it is quite successful, but it should also appeal to a broader audience, as a very useful reference for hospital residents and practitioners who want a concise explanation of the anatomical features of many of the sometimes baffling neurological problems they face in their clinics.

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