general morphological, physiological features of skeletal muscle and its general pathological reactions. In addition to discussions of biopsy handling and staining techniques, there is also a brief section illustrating common histological and ultrastructural artifacts. The remainder of the chapters in this section illustrate and discuss the normal and abnormal cellular and subcellular components of skeletal muscle in some detail. The second major section describes the pathology of skeletal muscle on a disease-by-disease basis.

The division of the text into two sections has an invaluable didactic advantage for the diagnostician. Muscle diseases rarely have pathognomonic single abnormalities, and usually it is a suite of abnormalities that points to the disease in question. The initial discussion of abnormalities on a structure-by-structure basis is therefore useful in shaping the differential diagnosis and guiding discussion with the referring clinician. Where a disease is defined by a single morphological feature (e.g. myopathy with cylindrical spirals) there is occasionally some redundancy. The discussion is skeptical in tone but insightful. I sometimes found myself wishing for more discussion of the molecular aspects of some disease entities, but in general the text is concise, and the references carefully chosen. There is considerable historical depth in some areas as well: these features strongly and positively reflect on the clinical experience of both authors.

Probably the strongest feature of the book is the wealth of superb illustrations of ultrastructural and light microscopic features. There are over 100 beautifully printed color plates, and over 600 black and white photographs. These are carefully and liberally distributed throughout the text. The variety and quality of these illustrations alone ensure that this book will remain an important diagnostic guide for some time to come. I would recommend this reference to anyone interested in morphological aspects of skeletal muscle disease, whether resident, fellow or practicing clinician.

Patrick Shannon
Toronto, Ontario

CEREBRAL ISCHEMIA: MOLECULAR AND CELLULAR PATHOPHYSIOLOGY. 1st Edition. 1999. Edited by Wolfgang Walz. Published by Humana Press Inc. 278 pages. C$181.25 approx.

Cerebral Ischemia: Molecular and Cellular Pathophysiology is presented as a text that will provide pertinent and up-to-date information to a variety of interested readers. The contents of the book are laid out in a manner that targets health care professionals who are already seasoned in this field. The book begins with a detailed overview of the differing mechanisms leading to ischemic damage and the resultant cellular and neuronal death associated with it. The remainder of the text is divided into two sections, factors in the brain microenvironment and cellular changes associated with ischemic episodes.

The section “Factors in the Brain Microenvironment” is divided into subsections which address issues of electrophysiology, edema formation, calcium overload, oxygen radicals and initiators of inflammatory responses. These subsections, in a succinct manner, contribute to the overall theme of the book by successively covering individual but related factors in the brain microenvironment. The format is a compilation of scientific review articles with the underlying message of how neurons die during and following ischemic episodes. A reader with experience in this field will be able to tie the separate issues presented into a cohesive whole. However, due to lapses in clarity and a lack of illustrations to demonstrate the inter-relationship among the many factors covered, this series of subsections will not allow the less informed reader to gain a comprehensive understanding of the central message.

The section, “Cellular Changes”, is also divided into subsections, with a similar format to the previous one. This section addresses the issues of altered gene expression, the debate of necrosis versus apoptosis, gliosis and phagocytosis, with a central message of altered cellular performance in the face of an ischemic episode. It flows from topic to topic with a more developed sense of clarity, but remains a compilation of review articles. Once again an informed reader with the ability to make links among the subjects covered separately will benefit from the information provided. However, a less informed reader will be left with the sense that they have not understood the central message.

To conclude, this is a very useful book for the experienced stroke physician and the educated basic scientist/student of cerebral ischemia research. It is, therefore, highly recommended to these groups as a source of information, as an instructional tool and to stimulate insight and new hypothesis to define future experimentation.

Daniel T. Warren and Alastair M. Buchan
Calgary, Alberta

HANDBOOK OF ATAXIA DISORDERS. 2000. Edited by Thomas Klockgether. Published by Marcel Dekker, Inc., New York. 688 pages. C$316.05 approx.

This multi-authored volume addresses basic and clinical aspects relating to the broad spectrum of cerebellar disorders. It is directed primarily at the clinician who deals with these patients. Although multi-authored, the editor has been able to minimize style differences between chapters by applying a uniform format throughout the volume. Hence, each chapter begins with an outline of its contents, each organized in a similar fashion. A curious oversight is in the first chapter, in which the references are listed differently from elsewhere in the book.

Initial chapters deal with the functional architecture and physiology of the cerebellum, and with the history of ataxia research. Neurology residents will find the brief chapter summarizing a clinical approach to cerebellar dysfunction to be particularly useful. Individual chapters are devoted to each of the major subtypes of cerebellar disease, with each chapter including sections on epidemiology, molecular pathogenesis, neuropathology, and clinical features. Overlap between chapters, although inevitable to some degree, has been kept to a minimum. Each of the autosomal dominant spinocerebellar ataxias (types 1-7 and 10) are dealt with separately, with ample information to instruct the reader on the differences and similarities, in terms of both clinical and DNA abnormalities. The autosomal recessive ataxias are dealt with in a similar fashion, with scholarly chapters on Friedreich’s ataxia, ataxia-telangiectasia, Refsum’s disease, and other recessive disorders. From a Canadian standpoint, it was refreshing to see a chapter dedicated to the Charlevoix-Saguenay form of autosomal recessive spastic ataxia. Other chapters include one on prion diseases associated with ataxia, sufficiently current that it includes the important observation that ataxia is an early feature in almost all