Journal of Neuropathology and Experimental Neurology

Vol. 52, No. 5
September, 1993
pp. 550–551

BOOK REVIEWS

The Molecular and Genetic Basis of Neurological Disease. *R. N. Rosenberg, S. B. Prusiner, S. DiMauro, R. L. Barchi, and L. M. Kunkel,* Eds. Butterworth-Heinemann, Boston, 1993, 1,023 pp. Price: $225.00.

The authors of this book review the molecular pathogenesis of major common and rare neurological diseases. As noted in the preface, the book gathers into one volume a very large body of literature on this subject, most of which was not available 5 years ago. The book is slightly over 1,000 pages long and such a prodigious volume indeed reflects the enormous impact that advances in the molecular biology of the normal and diseased nervous system have had on developing a detailed understanding of the pathogenesis of a wide variety of hitherto puzzling neurological disorders. In fact, the pace of these advances continues to accelerate with almost weekly reports of new and dramatic insights into disorders of the central and peripheral nervous system as well as of the musculoskeletal system. To give but a few examples, while this review was being prepared, a mutation in the Cu/Zn superoxide dismutase gene was found to be associated with familial amyotrophic lateral sclerosis (Nature 362:59–62, 1993) and a putative X-linked adrenoleukodystrophy gene was discovered (Nature 361:726–30, 1993). Both reports are likely to stimulate new lines of research into some of the least understood neurodegenerative and neurodystrophic conditions, respectively. Thus, although a shortfall of a book of this kind is the nearly impossible task of providing a comprehensive overview of the molecular and genetic basis of neurological diseases when the field itself is in the throes of a revolution due to frequent and exciting new revelations, the authors of this book have been remarkably successful in providing what might be termed a highly informative and very useful "interim status report" on important advances in the field, especially those obtained over the last 5 years. This is no small task, but the task has been made possible by the careful selection of an outstanding group of expert authors of the chapters in this monograph. In fact, the authors have made and continue to make important contributions to research on the molecular and genetic basis of neurological diseases.

The book is logically divided into Part I through Part XXII with each part or section being devoted to well-defined, coherently "clustered" sets of nervous system disorders (e.g. disorders involving carbohydrates, amino acids, lysosomes, mitochondria, peroxisomes, degenerative disorders, etc.). Specific topics in Parts II–XXI are introduced in Part I by an overview of general aspects of the molecular genetics of nervous system diseases, and the book concludes with a "peek" into the future (which might not be a too distant one) in Part XXII which covers gene therapy and the consequences of the human genome project for neurologic diseases. Thoughtfully prepared tables, conceptually informative schematic illustrations and numerous figures that show representative data (from photomicrographs of patients afflicted with a given disease to Northern, Southern and Western blots; from MRI scans and light microscopic photomicrographs to electron micrographs) enhance the overall quality of the book and help summarize or convey in a highly effective manner the key molecular pathological features of the diseases covered by a given section of the monograph.

In sum, the monograph does a first rate job in trying to provide an early 1993 "still photograph" of a rapidly moving "target," i.e. the molecular pathogenesis of a large group of common and rare nervous system diseases. As such, the monograph serves a very useful function for residents, clinicians and neuroscientists. By gathering into one volume a summary of the recent progress in the molecular neurosciences that should lead to the development of new and innovative therapies of a wide variety of debilitating diseases, the book should inspire the next generation of clinical and basic neuroscientists to ensure that society reaps the benefits of the efforts of the many neuroscientists who have made the revolutionary discoveries that are so expertly surveyed in this book.

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Dementia. *Peter J. Whitehouse,* Ed. (Contemporary Neurology Series, Volume 40.) F. A. Davis, Philadelphia, 1993, 465 pp. Price: $90.00.

A forerunner of this book, *Dementia* (Charles E. Wells, ed.), was published in its second edition in 1977, too soon to include the earliest reports of a cholinergic deficit in Alzheimer brain. The field of dementia has undergone innumerable changes since then: the appearance of a major new dementing disorder associated with HIV infection, experience with new imaging techniques, extensive trials of cholinergic therapy and advances in neurobiology and genetics in Alzheimer's disease, to mention a few. The present volume is a compact reference on a subject of enormous scope. The chapters are generally updated to late 1991. The authors have made an effort to provide comprehensive reviews and define methodologic problems. The text is usually well organized, lucid, and succinct.

The book has four parts. In Part I (Approaches to the Study of Dementia) there are chapters on epidemiologic