

Regeneration, and Spontaneous Recovery of Function after Spinal Cord Injury. Brief descriptions of a few of the 31 chapters indicate the scope of the book.

Heumann and co-authors (Martinsried & Oxford) describe elegant work done over the past five years indicating how the synthesis of nerve growth factor is enhanced during Wallerian degeneration by interleukin-1 released from macrophages. A role for NGF in regeneration is suggested by the fact that regeneration of sensory but not motor axons is impaired in mutant mice which fail to recruit macrophages into the endoneurium. Walicke (San Diego) reviews her work on the neurotrophic and gliotrophic actions of fibroblast growth factor and describes a modulatory influence of transforming growth factor- β . It is virtually impossible for any book to be up to date in the field of neurotrophic factors: genes for ciliary neurotrophic factor, neurotrophin-3 and a third molecule influencing neurotransmitter plasticity have all been sequenced since the manuscripts for this meeting were submitted.

The section on glial cells includes chapters by Miller and Smith (Cleveland) and by David (Montreal) describing permissive, non-permissive, and perhaps inhibitory effects of astrocytes and oligodendrocytes on axonal growth. Graeber and Kreutzberg (Martinsried) describe glial reactions surrounding axotomized anterior horn cells and Ritchie (Yale) writes on voltage-dependent ion channels on glial cells, each article reflecting many years of laboratory experience.

Chapters in the section on molecular mechanisms survey topical fields of molecular and cell biology germane to neural repair. Hanley and Benton (Cambridge) draw attention to three overlapping families of molecules: heat shock and stress proteins, proto-oncogenes and calcium signalling. One begins to think that cascades of molecular interactions that maintain neuronal homeostasis may rival coagulation events in their complexity. Studies on homeobox domains (Papalopulu et al, London) and the compound eye (Rogge & Banerjee, Los Angeles) in *Drosophila*, esoteric to many clinicians, indicate how simple invertebrate systems can be used to discover broadly applicable principles of neural development and plasticity.

The book provides a good overview of current research in neural regeneration. Even better would be to attend the next Asilomar meeting on regeneration presumably in 1992.

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PARKINSON'S DISEASE. 1990. Edited by Gerald Stern, M.D. Published by John Hopkins University Press. 675 pages. \$127 Cdn. approx.

James Parkinson's seminal essay on the shaking palsy in 1817 is a medical classic. There have been several textbooks published on Parkinson's Disease in the last few years but these have emphasized a limited number of aspects of the condition.

The text on Parkinson's Disease edited by Stern is a tour de force of current knowledge of Parkinson's Disease. It is a multi-authored text written by selected authorities in the field. The first section provides a detailed background for the reader in the anatomy, physiology, biochemistry and pharmacology of Parkinson's Disease and relates these areas to provide a functional overview of the basal ganglia regions. The pathology of

Parkinson's Disease is covered exhaustively in this section and there is also coverage of new aspects of research in Parkinson's Disease including the surgical replacement of dopaminergic cells in the basal ganglia.

The second section of the book covers the major clinical aspects of Parkinson's Disease including the etiology, epidemiology, salient clinical features of Parkinson's Disease and its natural history. Case histories are used to clarify various aspects in this clinical section. There is also a good section on the practical classification of parkinsonian syndromes and their differential features.

The section on therapy for Parkinson's Disease includes a general overview of the principles of medical and surgical therapy for this condition. There was also a detailed discussion of specific drugs used currently in Parkinson's Disease as well as the complications of medical therapy. This section presented the current approach to surgical treatment and its place in modern therapy for Parkinson's Disease. There is a final section dealing with some aspects of current research in Parkinson's Disease.

Overall, the book is easy to read, well written and clearly referenced. Sensory symptoms in Parkinson's Disease is perhaps the only clinical aspect that is not dealt with in any significant detail.

The text will appeal to trainees in the neuroscience field as well as the practicing neurologist.

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CURRENT AND FUTURE TRENDS IN ANTICONVULSANT, ANXIETY, AND STROKE THERAPY. 1990. Edited by Brian S. Meldrum and Michael Williams. Published by John Wiley & Sons. 555 pages. \$156 Cdn. approx.

Although the title of this book may appear a bit confusing, the rationale behind it is relatively simple. It presents the proceedings of a recent symposium held in May 1989 on the chemical and biological properties of several compounds which may have a potential therapeutic effect in different areas of brain research. The link between these compounds and their potential therapeutic use in epilepsy, anxiety states and stroke is in many cases through presumed common pathophysiological mechanisms. The book itself is divided into four sections, the first three cover therapeutic aspects of epilepsy, anxiety and stroke while the last section gives a synopsis of different novel compounds presently under investigation in these areas of research. Although much of the thrust of this book revolves around pathophysiological principles and molecular mechanisms of disease and therapy, some attention is given to more clinically oriented aspects, especially in regards to epilepsy and stroke prevention. A good example of this is the chapter entitled "anti-epileptic drugs: historical perspective, current therapy and clinical investigations". The subsection on clinical trials of anti-epileptic drugs gives a good outline of how one can use clinical methodology to answer a clinical question relating to drug efficacy. Maybe of more special interest for basic researchers is the section on new compounds where the pharmacological, toxicological and potential therapeutic properties of several investigative substances are reviewed. This book does not address itself to the general neurologist or neurosurgeon, but rather more so to indi-