Alzheimer type, a disease which current fashion ascribes both to the very old as well as those with an early onset of clinical symptoms. The book ends with some comments on endogenous opiates.

This is a book worth having. In idle moments I used to classify neuropathologists into several categories: "Plumbers," who deal with infarction, hemorrhage, and the blood-brain barrier; "Lumpers," who deal with tumors; and "Grease Monkeys," who deal with myelin and its biochemistry. It is a pleasure to see the field expanding so as to permit a new and yet to be named category delving into neurotransmission and finely detailed analyses of diseased brain function. This book, and others like it, but more directly targeted to the needs of neuropathologists will accelerate the expansion.

John Pearson, M.D.


This volume attempts to summarize the current state of knowledge concerning biological membranes in growth and development. It is subdivided into six sections dealing with I) biosynthesis of membrane proteins, II) membrane processes in fertilization and cell division, III) development, regeneration, and metabolism of nervous tissue, IV) role of the plasmalemmal and extracellular matrix in tissue organization, V) membrane turnover and endocytosis, and VI) organization and transport by epithelia in culture. The scope of this book is formidable, and any one of the six sections could have been the focus of a separate volume (and symposium) if the subject matter was to be examined in depth and in detail. Thus, the volume represents a potpourri of papers which differ significantly in length, scope, and quality. This volume will, on the whole, confuse the uninitiated, while the expert will not be satisfied.

The neurobiologist and neuropathologist may find the following papers of considerable interest: cell polarity (Reggio et al); re-organization of neuromuscular junctions during development (O'Brien et al); acetylcholinesterase and acetylcholine receptors in muscle (Rotundo and Fambrough); entry of enveloped viruses into epithelial cells (Matlin et al); mechanism of action of the epidermal growth factor (Schlessinger et al). Some interesting ideas concerning the role of gangliosides in neuronal differentiation are presented in a brief paper by Leon et al.

In summary, this book is of limited value to the neurobiologist and neuropathologist, who might be advised to review it and note the few articles of special interest. The volume certainly belongs in a medical school library, primarily as a reference text.

Nicholas K. Gonatas, M.D.


The contributions of Victor Hamburger, Rita Levi-Montalcini, and Stanley Cohen in the identification, biological characterization, and purification of nerve growth factors are discussed. The book is well-illustrated and contains a comprehensive list of references. It is a valuable resource for researchers in the field of neurobiology.