Book reviews


As the brain is the most intricate organ of the body, it follows that the history of how knowledge of its morphology has accumulated is likewise complex. The inherent difficulties of describing this progress seem to have discouraged historians from compiling a history of cerebral anatomy. Fortunately for us, however, Professor Meyer has not been daunted by the task and no better person could have tackled it. His knowledge of neuroanatomy together with his historical and linguistic skills make him the ideal person for such an arduous labour. His achievement is highly commendable.

The ‘Aspects’ that he has selected for consideration are the basal ganglia, the diencephalon, the olfactory brain, and the cerebral convolutions and fissures; the final chapter deals with ‘Some problems concerning the discovery of the neurone’. Each section is a complete survey from classical antiquity to the 20th century and in each case there is an excellent and readable text, impeccable documentation, and very good illustrations.

Professor Meyer describes the work as a source book and this will be its main value. Few will wish to read it through completely but anyone involved in the neuro-sciences who needs to consult a reliable authority on the history of the anatomy of that part of the brain with which he is working will consult it. ‘Part 4 References’ alone will be an enormous help to those who seek accurate citations of primary sources, as well as to the historian interested in the secondary literature on the subject.

The author and all those associated with the production of the book are to be congratulated on an important contribution to the history of medicine. It should be available in all medical libraries and on the shelves of all those in the clinical or research neuro-sciences. Its price is modest as related to the value of the contents, its production is excellent, and it will obviously remain a constant reference source for many years to come.


There can be little doubt that knowledge of biochemistry is becoming of increasing relevance to clinical medicine. The use of L-dopa and the decarboxylase inhibitors in Parkinsonism or the employment of monoamine-oxidase blockers and lithium in the management of psychiatric cases are good examples of the day-to-day application of neurochemistry.

This book provides a good basis for those wishing to keep abreast of this rapidly advancing field, although it is written from the standpoint of a basic scientist and full appreciation requires knowledge of modern biochemical principles. In the 4th edition Professor McIlwain, joined by a colleague, Dr. H. S. Bachelard, from the Institute of Psychiatry, have written an extended and improved edition of an already well-established textbook. The first part refers to biochemical measurements made on living subjects with special reference to the value of A/V differences. These studies indicate the central role of glucose metabolism but recent observations on obese starving patients have surprisingly shown that the central nervous system may utilize β-hydroxybutyrate as an energy source. Further chapters relate to a systematic consideration of intermediary metabolism, nutrition, structural changes, and neural transmission. Much of the chemistry of the nervous system is involved in transmitter synthesis and the resulting cation fluxes make major demands on energy synthesis within the nerve cell. An understanding of these processes is relevant to an appreciation of the pathogenesis of diseases such as epilepsy. A specially interesting section on drug action indicates the unusual susceptibility of the brain to alteration in its environmental. Anaesthesia, action of convulsants and depressants, tolerance to morphine, and the action of pituitary hormones are topics discussed in final chapters. The authors show how biochemistry can contribute to medicine by frequent illustrative examples. The chemical pathology of the nervous system is only incidentally referred to, although a mass of condensed information with up-to-date references is included.

Unfortunately, for such an important book, the style is on the whole heavy, and some multi-figures unnecessarily complicated—for example, Figs 4.4, 10.4, and 10—but these are minor criticisms in a work full of appropriately thought-provoking information. There can be little doubt that this book will continue to be an outstanding contribution to the neuroscientific literature.

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