Book Review


This small book is an excellent guide to the present state of knowledge about the transmission of messages in the living body. The author is well known by his pioneering work on neuromuscular transmission for which he was awarded the Nobel Prize of Medicine 1970.

The first chapter deals briefly with the anatomical elements of neuromuscular organisation. In the remaining chapters the following subjects are treated: electricity and neurophysiology, electrophysiological observations on single nerve and muscle fibres, the membrane concept, the initiation and propagation of the impulse, the transmission of impulses within cells and across cell boundaries, the transmission of impulses from the nerve to muscle, the quantal nature of chemical transmission, the transmission of signals across neuronal synapses, and the initiation of muscle contraction. Theoretical concepts and ideas of these problems are discussed and many of them are pursued to the numerical level with the best knowledge of physics and physical chemistry. Some of the classical descriptive terms, such as threshold, action potential, refractory period, accommodation, inhibition and excitation are to a large extent understood in terms of the physical chemistry of cell membranes and they could, if one wished, be replaced by more scientific (though less convenient) language - as the author mentions in conclusion.

This book will be of great interest not only to neurophysiologists, but also to physicians working in the fields of neurology, physical medicine and rehabilitation, anaesthesiology, psychiatry and to the students of medicine looking for a deeper knowledge of these problems.

Its list of references is extensive and the price is low. It was a very good idea to translate this book, originally written in English, into German. It is of interests to mention, that the famous author was born in Germany, where he also finished his studies of medicine.  V. Skorph.