

## BOOK REVIEWS

ANNUAL REVIEW OF PHYSIOLOGY. EDITED BY VICTOR E. HALL  
Pp. 591. Stanford, Calif: Annual Reviews Inc. 1956. Price \$ 7.50.

The 1955 volume of the Annual Review of Physiology was planned during the Nineteenth International Congress of Physiology at Montreal. The editorial committee was aided by a group of honorary members consisting of Professors E. D. Adrian, U. S. von Euler, C. Heymans, G. Moruzzi, and A. Rosenbleuth. The roster of the authors is selected from a large number of countries. Thus there are three chapters from Sweden, two each from England and France, and one each from Argentina, Belgium, Canada, Germany, and the Netherlands. There are ten chapters from the United States. The Preferatory Chapter has been written by Dr. Bernardo Houssay who is not only a distinguished physiologist, but also a "heroic defender of the freedom of science and advocate of its internationalization." Dr. Houssay writes on Trends in Physiology as seen from South America. His description of the events in South America and other American countries in the early years of this century should interest readers in this country today. Says he "At one time the only activity considered proper for a medical graduate was that of a clinical practitioner or a surgeon. A laboratory had no other purpose but to carry out a few tests in aid of clinical diagnosis, tests which were not always considered as indispensable. No original research was done. The laboratory man was considered second rate in respect of professional and social status, and his remuneration was correspondingly lower than that of his clinical colleagues. Medical schools were in the hands of men with *large and time absorbing* practices, who had no knowledge of scientific methods or of the significance of research. The most powerful was frequently the President's personal physician, or the physician who had the largest number of members of the Congress for patients, or might be himself—member of the Congress". One almost thinks Houssay was writing for India of today.

The physiological literature of the past year is ably reviewed by authorities who are masters in their own fields. The Annual will prove of great value for physiologists, pharmacologists and other research workers.

M. L. G.

### IONIC INTERPRETATION OF DRUG ACTION IN CHEMOTHERAPEUTIC RESEARCH.

BY A. V. TOLSTOUHOV, Pp. 276. New York: Chemical Publishing  
Company, Inc., 1955. Price \$ 10.00.

In the past few years rapid progress has been made in the field of medicinal chemistry and several monographs and books covering its various aspects have been written. The present monograph attempts at deemphasizing the purely structural characteristics of medicinal agents by bringing into focus the role played by their physicochemical properties. The author has demonstrated that the physicochemical approach to the problems of chemotherapy, almost neglected upto now, helps avoiding the unnecessary preparation and biological testing of hundreds, and sometimes thousands of compounds to arrive at an active agent.

There are seven chapters in all. The first or the introductory chapter deals with the physicochemical theory of selective staining and selective drug action. The remaining chapters are devoted to physicochemical approach to biological problems; various drugs (local anesthetics, anti-histaminics, hypnotics, amidines, acridines and phosphonium compounds etc.); the effect of radicals on the physicochemical constants of aromatic amines and organic arsenicals; precipitation of proteins by mercurials and hexylresorcinol and dissociation and hydrolytic constants of salts. In all these, attempts have been made to correlate the physicochemical characteristics of tissue ampholytes, judged by their isoelectric points, with those of the drugs, measured by their dissociation constants, redox potentials and solubilities of complexes or salts formed between the drugs and the tissues. The author has deplored the slow penetration of these explanations in the standard university text books.

Extensive references to the original literature are found throughout the book. The monograph is a valuable contribution to the field of medicinal chemistry and will prove of immense value to all pharmacologists and research workers embarking upon the preparation of the potential pharmacodynamically active compounds. It is a thought provoking monograph. The reviewer's only complaint is, that for its size it is priced too high.

K. N. S.

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