

will ensure for the book a wide sale and circulation, and the Macy Foundation is to be congratulated on its timely choice of the subject. The book is well produced, attractively priced and contains very few errors.

W. J. WHELAN

## POLYPEPTIDES ACTING ON SMOOTH MUSCLES

### Polypeptides which affect Smooth Muscles and Blood Vessels

Proceedings of a Symposium held in London on 23rd and 24th March, 1959. Edited by M. Schachter. (Biological Council's Co-ordinating Committee for Symposia on Drug Action Series, Vol. 4.) Pp. xv+336. (London and New York: Pergamon Press, 1960.) 50s. net.

THE Co-ordinating Committee for Symposia on Drug Action, under the chairmanship of Sir Charles Harington, has sponsored discussions at the Wellcome Building in London in the spring since 1955. The subjects of these symposia have been histamine, hypotensive drugs, 5-hydroxytryptamine, and quantitative methods in human pharmacology. The present book deals with the fifth of these symposia, and shows how much this subject has developed since 1953 when fifteen authors contributed to a meeting in Montreal and afterwards published their contributions in a book (*Polypeptides which stimulate Plain Muscle*. Ed. J. H. Gaddum. Edinburgh: Livingstone, 1955).

The structures of oxytocin and vasopressin were first announced at that earlier meeting; now it is possible to discuss the relation between the structure and action of a number of homologues. Oxytocinase has been estimated with an artificial substrate, and a separate vasopressinase has been found in the placenta. Substance P resembles these pituitary hormones in that it appears to be stored in nervous tissue, but its structure and function are still unknown. The structure of angiotensin was elucidated in 1956, and the actions of a number of homologues have now been measured, but there are still serious doubts about the relation of this substance to hypertension.

Kallidin, bradykinin and other kinins form a group with very similar actions. The isolation of bradykinin and its composition in terms of amino-acids were announced at the meeting in 1959; the exact structure is now known.

The final session was devoted to anaphylatoxin, leucotaxine, exudin, globulins affecting permeability and the activation of large molecular substances by injury. Some of these latter substances are still not clearly defined and there is much more work to be done by the chemists who have already done so well in this field.

Some of these polypeptides are thought to play important parts in physiology and pathology. Vasopressin controls the excretion of water, and oxytocin controls the uterus and the breast. The kinins may be released to cause vasodilatation in active tissues. There is clearly much to be discovered about all these substances and every reason to expect that they will prove to be physiologically important.

The symposium was a success because it collected the leading authorities from all over the world. Owing to the generosity of the Wellcome Trust and

Sandoz, Ltd., it was possible to invite contributors from the United States, Sweden, Switzerland, Germany and Austria.

The book gives an authoritative summary of work in this field. It has been edited by M. Schachter and is beautifully produced, but rather expensive. It did not appear until a year after the symposium on which it is based, but that was partly due to a printers' strike. It is likely to remain the best summary of work in this field for some time to come.

J. H. GADDUM

## SEDIMENTARY ROCK TYPES

### Microscopic Sedimentary Petrography

By Prof. Albert V. Carozzi. Pp. viii+485. (New York: John Wiley and Sons, Inc.; London: Chapman and Hall, Ltd., 1960.) 92s. net.

THE work of Prof. Albert V. Carozzi is well known to geologists by the publication in 1953 of his *Petrographie des Roches Sedimentaires* and by other important papers. Here he describes his work and that of others in English. Throughout the book the author refers to both American and European examples, and the long list of references at the end of each chapter is by no means the least valuable part of this important book. No attempt is made to confuse the student with a wealth of individual examples, but rather to describe ideal types together with the chief variations. From such descriptions it is a relatively simple matter for the research worker to apply such general principles to his own particular problems.

The author divides the sedimentary rocks into three main groups, namely, the clastic, the biochemical and the chemical rocks. The first and last groups are well known to students, but the middle division is less familiar. Under this heading are described carbonate, siliceous, iron-bearing and phosphoric rocks which possess the common property of having been generated chiefly by organic as well as chemical processes.

In Part 1 the microscopic characters of the clastic rocks are dealt with under the headings of arenaceous, rudaceous, pyroclastic and argillaceous rocks. Microscopic definitions are reduced to an absolute minimum, and in this as in succeeding sections of the book the author directs attention to the great amount of additional knowledge which is still required for a complete understanding of the genesis of many sedimentary rocks.

Part 2 deals with the biochemical rocks, and an evaluation of the relative value of the two processes—organic and chemical—is attempted.

In the concluding part the evaporites are described. These are, perhaps, among the most difficult of all sedimentary rocks to understand, and the author has wisely not theorized further than published descriptions enable him to do so.

Prof. Carozzi's chief interest has always centred on the carbonates, and the many workers in this field will find much of value in his able summary concerning the formation of the oolites and dolomitization.

The book concludes with extensive author and subject indexes, and is well produced on good paper with a pleasing type, though it is unfortunate that it was necessary to price it rather on the high side.

F. S. WALLIS