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Structure and Function of Haemocyanin

Edited by J. V. Bannister

Springer-Verlag; Berlin, Heidelberg, New York, 1978

xiv + 295 pages. Softback DM 76; \$33.50

This book includes thirty-five reports presented at the Fourth International Meeting on Haemocyanin, recently held in Malta, and an introduction by R. J. P. Williams. The successive chapters are original contributions on the subject, pointing out on the one hand, the recent progress in special fields all having a general interest and, on the other hand, an appreciation of the personal work of the authors.

The first eight papers are devoted to haemocyanin studied as a protein. Its specificity according to various zoological groups, from molluscs to arachnidae, has been known for a long time; its study at a molecular level is now proceeding in a satisfactory way. The breakdown of the native protein into subunits and their structure and properties are presented in the six following papers and its physical properties in three, dealing with nuclear magnetic resonance, fluorescence and absorption. Haemocyanin has been studied as a copper complex (active site of oxygen transport, photooxidation, X-ray photoelectron spectroscopy, electron paramagnetic resonance) in five reports. Various reactions of the copper respiratory protein are discussed in eleven chapters, chiefly devoted to oxygen binding and to interaction with

chemical reagents on specific sites of the protein molecule. Two physiological reports present evolutionary studies and researches on the production of the respiratory protein in gasteropod molluscs.

This volume is of great interest in many respects, for biochemists as for biologists working on oxygen transport by blood and on evolutionary problems. Proteins of very high molecular size such as haemocyanins provide exceptional possibilities for the study of dissociation and association of subunits. Special attention in this field must be concerned with the structure of crystals and with the molecular coordination of subunits, as shown previously in the case of hemoglobins of high molecular size in invertebrates. The nature of the mechanism of oxygen transport by a copper active site and the structural aspects of the specificity of haemocyanins remains partly unknown. Therefore, this volume is of a much wider interest than a monograph for the specialist. It contains information on general problems of protein chemistry as well as on comparative biochemistry considered at molecular level.

Jean Roche

Chemistry and Biology of Thrombin

Edited by R. L. Lundblad, J. W. Fenton and K. G. Mann

Ann Arbor Science; 1977

564 + xii pages. £14.20; \$24.75

This book contains the proceedings of a conference on the Chemistry and Biology of Thrombin held at the Mayo Clinic and Foundation on March 31 and

April 1, 1977. Since publication occurred later in the same year it is clear that the major criterion laid down by the Editors, i.e. that of speed, was met. However,