

BOOK REVIEW

Methods in Membrane Biology edited by Edward D. Korn Vol. 1; Plenum Publishing Corporation, New York. 1974, pp. 227 + xvi.

The first volume of this new series consists of five chapters.

The first chapter (by A. D. Bangham, M. W. Hill and N. G. A. Miller) is devoted to the preparation and use of liposomes as models of biological membranes. Techniques and materials used for obtaining these artificial vesicles, methods for their characterization and study as well as their physical properties in aqueous media are described: this last part especially is very completely developed.

Thermodynamics and experimental methods for equilibrium studies with lipid monolayers are the subjects of the second chapter (by N. L. Bershfeld). Thermodynamics deal essentially with one-component systems but some paragraphs are also devoted to two-components systems. Experimental methods treat the film balance, the evaluation of the surface excess concentration of adsorbed lipid components and other techniques.

In the third chapter (by D. W. Urry and M. M. Long) circular dichroism (C.D.) and absorption studies on biomembranes are discussed. The various parts of this chapter are devoted to the distortions in absorption and C.D. spectra (instrumental artifacts are shortly outlined), to the calculations of the particulate poly-L-glutamic acid model system, to the presence or absence of artifacts at 222 nm in the C.D. of biomembranes, to the approximate corrections and to the analysis of corrected membrane data.

Isolation and serological evaluation of HL-A antigens solubilized from cultured human lymphoid cells are the topics of the fourth chapter (by R. A. Reisfeld, S. Ferrone and M. A. Pellegrino). In addition to these subjects which are critically and minutely treated, a physico-chemical characterization of HL-A antigens is also outlined. In spite of the continuous developments, this chapter represents an almost up-to-date methodology review of the issue.

The last chapter (by Y. Kagawa) is devoted to the dissociation and reassembly of the inner mitochondrial membrane. This comprehensive review is divided in seven parts treating methods of dissociation of the inner membrane and fractionation of membrane proteins, analysis of membrane components, purification of extrinsic and intrinsic proteins and the problem of reassembly.

Every chapter is completed by a more than sufficient number of figures and tables. The treatment of each subject is preceded by a short but clear introduction and followed by a large list of references.

In conclusion the first volume of this series is a modern, complete and almost up-to-date publication which should be considerably useful to those interested in methods used in membrane biology.