

Membrane Biochemistry

by E. Sim

Chapman and Hall; London, 1982

80 pages. £2.75

I found this slender paperback in Chapman and Hall's *Outline Studies in Biology* series up-to-date and good value for money. After a brief introduction there are 4 chapters. The first is on biological membranes generally, presenting the evidence (X-ray diffraction, electron microscopy, NMR) for the fluid mosaic model and also, usefully, some reservations about it. ESR and fluorescence evidence for fluidity is discussed.

The second chapter concentrates on membrane lipids and has a very good account of the physical evidence for their liquid crystalline state. The effect of cholesterol on phase transitions, which in some texts only confuses the reader, is expounded lucidly. Lipid asymmetry is dealt with. The third chapter is about membrane proteins and methods for investigating their topography. As expected, the most detailed information comes from the red cell. Cytoskeletal proteins of other cells are also discussed, as is the coated vesicle concept.

The final chapter deals with membrane biosynthesis and in particular with the mechanisms by which membrane proteins are delivered to their proper cellular locations. This is a rapidly moving field and much remains unknown. Nevertheless, a good survey of current concepts is provided in an area not covered very well by other recent membrane books (*Biological Membranes*, by Harrison and Lunt; *Membranes and their Cellular Functions* by Finean, Coleman and Michell; and *The Molecular Biology of Cell Membranes* by Quinn). In general, Edith Sim's book compares very favourably with these somewhat larger volumes.

There is an adequate index and each chapter is provided with 40 or 50 references and a few suggestions of review articles for further reading. The book will serve final year undergraduates and research students very well.

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