
Introductory Remarks

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Introductory remarks

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The purpose of this discussion meeting was to consider in depth the structures of some selected biological membranes and envelopes – in particular, those with marked, morphological substructure. Where such substructure could be related to function, this also was considered, the aim being to illustrate by multidisciplinary techniques the interdependence of membrane morphology and physiology. Inevitably, as the discussion was restricted to two days, with such a ubiquitous and pantomorphic subject as biological membranes, the field had to be strictly limited. Some of the most important aspects of membrane function, including bioenergetics, transport mechanisms and membrane flow, were deliberately excluded, largely because they have been the subjects of recent discussion meetings either at the Royal Society or elsewhere. Despite such restrictions, we had a distinguished field of research workers from whom to select our speakers. We were indeed fortunate, that so many were able to come, from many parts of the world, and contribute to this meeting.

The papers presented here demonstrate, among other things, that the major advances in the understanding of membranes and membrane-associated phenomena arise as the result of a multidisciplinary approach to the subject. Structural studies alone, though fundamental, are of limited value without the information supplied by biochemists and cell physiologists. Equally well, biochemical observations alone lack the third dimension of organization if divorced from a morphological framework.

In such rapidly developing fields as were discussed here, we can expect to see major advances in the next two to three years. One of the most important contributions made by the participants of this meeting, quite apart from the presentation of new work, was the provision of brief reviews of their subjects. These should serve as timely and useful reference works for the immediate future.