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Foreword

Not too long ago the lipid bilayer was considered a passive structural scaffold that held functionally active proteins. This perception has undergone a change in the recent past as a result of accumulating evidence for the involvement of lipid molecules in organization, dynamics, trafficking, sorting and function of biological membranes. The main reason underlying this paradigm shift has been the increasing ability to monitor lipid molecules by a variety of physico-chemical approaches.

It is against this backdrop that this special issue of Chemistry and Physics of Lipids titled Lipid Probes in Membrane Biology has been organized. The articles in this special issue cover various applications of a variety of lipid probes in addressing contemporary problems in membrane biology. The experimental techniques based on which the lipid probes are designed vary from fluorescence and magnetic resonance (ESR and NMR) to photolabeling, thereby providing a broad spectrum of approaches to study the membrane phenomena involved. While each of these techniques has its own advantages and limitations, it is expected that the synthesis of information and knowledge achieved from studies using multiple approaches would result in a comprehensive understanding of the underlying complex membrane phenomena.

I would like to make use of this opportunity to thank all the contributors who are leaders in their respective areas of research. Special thanks are due to Fritz Paltauf, Pat Crowley and Brechtje de Leiz for their cooperation and support in organizing this issue, and to Rajeshwari Srinivasan for invaluable secretarial help.

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