

Contents

INTRODUCTION	1
I. MOLECULAR ASPECTS	
Translocation and distribution of phospholipids across eukaryotic plasma membranes (A. HERRMANN, P. DEVAUX & A. ZACHOWSKI)	3
Protein-lipid interactions at membrane surfaces (A. WATTS).....	23
The super-ordered fluid: A domain model of cell surface membranes (M. EDIDIN).....	51
Membrane hydration (K. GAWRISCH, V. A. PARSEGIAN & R. P. RAND).....	61
II. PHYSICOCHEMICAL ASPECTS	
Cell surface electrostatics and electrokinetics (A. VOIGT & E. DONATH).....	75
Interfacial stability (W. T. COAKLEY, & D. GALLEZ).....	109
Surface free energy contribution to cell interactions (C. J. van OSS).....	131
General thermodynamic description of elastic properties of membranes (V.S. MARKIN & M. M. KOZLOV).....	153
III. FUNCTIONAL ASPECTS	
The influence of membrane electric field on cellular functions (R. GLASER).....	173
Phospholipid vesicle fusion induced by cations and poly-(ethylene glycol) (S. OHKI & K. ARNOLD).....	193
Membrane fusion and lysis by the amphiphilic peptides induced by charge neutralization: A model study of virus membrane fusion mechanism (M. MURATA, S. TAKAHASHI, T. KANASEKI & S. OHNISHI).....	221
Significance of hydrophobic interactions in membrane fusion of enveloped viruses (S. L. NOVICK & D. HOEKSTRA).....	237

VIII

Cell contact with solid surfaces (D. GINGELL).....	263
Cell-cell contacts (P. ANDRE & P. BONGRAND).....	287
Membrane-cytoskeletal interactions in cell adhesion and locomotion (K. BURRIDGE & W. T. JACKMAN).....	323
The behavior of cell surface components during cell locomotion: A quantitative approach (J. LEE, A. ISHIHARA, B. HOLIFIELD & K. JACOBSON).....	341
INDEX.....	363