1. Record Nr. UNINA9910309662503321

Titolo	Biochemical and Biophysical Roles of Cell Surface Molecules / / edited by Kausik Chattopadhyay, Subhash C. Basu
Pubbl/distr/stampa	Singapore : , : Springer Singapore : , : Imprint : Springer, , 2018
ISBN	981-13-3065-4
Edizione	[1st ed. 2018.]
Descrizione fisica	1 online resource (359 pages)
Collana	Advances in Experimental Medicine and Biology, , 0065-2598 ; ; 1112
Disciplina	574.875
Soggetti	Cell membranes Cell physiology Biomedical engineering Microbiology Membrane Biology Cell Physiology Regenerative Medicine/Tissue Engineering Biomedical Engineering/Biotechnology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	- Part I Membrane Organization -- Status of membrane asymmetry in erythrocytes: role of spectrin -- Multiple roles, multiple adaptors: Dynein during cell cycle -- Changes in the nuclear envelope in laminopathies -- Part II Biophysics of Membrane Proteins and Cell Surface Macromolecules -- The effect of nanoparticles on the cluster-size distributions of activated EGFR measured with photobleaching image correlation spectroscopy -- Factors influencing the chaperone-like activity of major proteins of mammalian seminal plasma, equine HSP-1/2 and bovine PDC-109. Effect of membrane binding, pH and ionic strength -- Exploring the Mechanism of Viral Peptide-induced Membrane Fusion -- Amyloids are novel cell adhesive matrices -- The prospects of Cadherin-23 as a mediator of homophilic cell-cell adhesion -- Structural-Mechanical and Biochemical Functions of Classical Cadherins at Cellular Junctions: A review and some hypotheses -- Part III G-Protein Coupled Receptors: from Structure to Function -- Identification of Sphingolipid-binding Motif in G Protein-

coupled Receptors -- Molecular Signatures of Cholesterol Interaction with Serotonin Receptors -- Part IV Cell Surface Macromolecules in Neurobiology -- Group I Metabotropic Glutamate Receptors (mGluRs): Ins and Outs -- Soluble Amyloid Precursor Protein : Friend or Foe? -- C. elegans locomotion: Finding Balance in Imbalance -- Part V Cell Surface Macromolecules: Infection, Immunity and Disease -- Induction of Apoptosis in Metastatic Breast Cancer Cells: XV. Down Regulation of DNA Polymerase-a-Helicase Complex (Replisomes) and Glyco-Genes -- Dynamic function of DPMS is essential for angiogenesis and cancer progression -- Benzothiophenes as potent analgesics against neuropathic pain -- PRR function of innate immune receptors in recognition of bacteria or bacterial ligands -- Structural basis and functional implications of the membrane pore-formation mechanisms of bacterial pore-forming toxins -- Abiraterone and Ionizing Radiation Alter the Sphingolipid Homeostasis in Prostate Cancer Cells -- A glycomic approach towards identification of signature molecules in CD34+ haematopoietic stem cells from umbilical cord blood -- Part VI Microbial Cell Surface -- Vitamin C: A natural inhibitor of cell wall functions and stress response in mycobacteria -- The Wrappers of the 1, 2-Propanediol Utilization Bacterial Microcompartments -- F-type lectin domains– provenance, prevalence, properties, peculiarities and potential.

Sommario/riassunto

Cell surface small molecules and macromolecules, such as members of cholesterol family (including steroid hormones), the glycolipid family (sphingolipids), the glycoprotein family (both N-linked and O-linked), and a vast array of other receptors have been shown to be involved in normal and abnormal cellular processes. The 11th International Symposium on Cell Surface Macromolecules, held in Mohali, India, in February 2017 provided a comprehensive update on the major advances in this area. Presenting selected contributions from this meeting, this book comprises 24 chapters, which provide in-depth analyses of data on the role of cell surface macromolecules in cellular function and their alterations associated with pathological conditions. It includes comprehensive research papers and critical overviews of the functional role of cell surface molecules, discussing topics such as biochemical, biophysical, and cell biological approaches to study cell membrane molecules, and metabolism of glycoconjugates.