

BIOLOGICAL ACTIVE SUBSTANCES EFFECTS TO THE STRUCTURE OF ANIMAL CELLS MODELS

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The major components of cells of animal origin are the membranes. It separate and defend the cells from bed environment. Membranes form a numerous compartments with local parameters intra the cells. Membranes lend the base for concentration or creation of determinate orders of molecules, or for its posttranslational modifications. Structural basis of membranes are the lipids. In our work the influence of biologically active substances (BAS), as operative factors of environment, on lipid-lipid interactions in membranes structure of multilammellar liposomes has been examined. As of experimental object with lipid-protein composition the erythrocyte ghosts, for study on the effect BAS on protein-lipid interactions in membranes structure were used. Due to of life activity the membranes parameters change: its crystallinity, components composition, amalgamation or discrepancy, location in the cell. Action BAS may be lacking of certain target but however, much touch the whole processes, effecting on different organizational levels - from regularity degree (on crystallinity) of membranes and bilayer thickness, up to reciprocal location of bilayers. It was shown that as of composition complicating of biological model object increases and the protection its structures from environment, in our case - BAS, up to complete it's leveling. When function emergence in model object, which is no more the cells fragments, and whole cell, action BAS on structural change in membranes again increase. Varies the microviscosity of erythrocyte membranes, the cell membrane decreases or is expanding in cells of ascetic carcinoma, thymocytes and lymphocytes by BAS.