

*УДК 577.37***CHLORPROMAZINE INTERACTIONS WITH LIPID BILAYERS****V.M. Ioffe, O.K. Zakharenko, G.P. Gorbenko***V.N.Karazin Kharkov National University, 4 Svobody Sq., Kharkov, 61077*

Received 30 June, 2006

The effect of cationic drug chlorpromazine (CPZ) on the structural state and physicochemical properties of model lipid membranes composed of zwitterionic phospholipid phosphatidylcholine (PC) and anionic phospholipid cardiolipin (CL) in molar ratios 8:2 and 3:2 has been investigated using the indicator dye Neutral Red (NR). CPZ incorporation into the PC/CL (8:2) liposomes led to the increase of NR partition coefficients. This effect was interpreted in terms of drug-induced membrane disordering. In contrast, CPZ association with PC/CL (3:2) lipid bilayers suppressed the dye partition which was assumed to be a result of lipid phase transition.

**KEY WORDS:** lipid bilayer, chlorpromazine, Neutral Red, partition coefficient