研究简报

胆酸钠与支撑磷脂双层膜作用的电化学研究

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摘要 采用电化学方法研究胆酸钠(NaC)与s-BLM的相互作用,并结合实验结果对NaC与s-BLM的作用机理进行了讨论.

关键词 支撑磷脂双层膜 胆酸钠 循环伏安 交流阻抗

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Electrochemical Study on the Interaction of Sodium Cholate with a Supported Lipid Bilayer Membrane

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Abstract The supported bilayer lipid membrane(s-BLM) was served as a biomembrane model. The interaction between sodium cholate(NaC) and s-BLM was investigated by cyclic voltammetry and alternating current(AC) impedance spectroscopy. The following conclusions were obtained: NaC can decrease the orderliness of lecithin molecule arrangement and induce pores or defects on s-BLM and the interaction between them depends on time, concentration and cholesterol. In addition, the defective s-BLM after interaction can be self-repaired in 0.1 mol/L KCl solution, which indicates that the interaction is reversible. Moreover, a possible mechanism of the interaction was proposed finally.

Key words Supported lipid bilayer membrane; Sodium cholate; Cyclic voltammetry; Alternating current impedance

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