

## INCORPORATION OF GPI-PROTEINS FROM *LEISHMANIA* IN MEMBRANE BIOMIMETIC SYSTEMS: INFLUENCE OF CHOLESTEROL/DPPC RATIO.

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Glycosylphosphatidylinositol (GPI)-anchored surface proteins of *Leishmania* seem to be responsible for the resistance of these parasites to serum complement-mediated cytolysis, uptake of promastigotes by macrophages and protection from degradation in the phagolysosome. This work aimed to verify the incorporation of 63, 52 and 45 kDa MW<sub>r</sub> GPI-proteins in liposomes and Langmuir monolayer containing different cholesterol/DPPC ratios: 0 to 0.9. Liposomes were formed in all conditions studied, but the incorporation of the GPI-proteins occurs only in the presence of cholesterol, reaching a maximum of 75% with 0.85 ratio. The average diameter of liposomes and proteoliposome did not vary significantly with cholesterol increase (~85 and 210nm, respectively). Cholesterol influence in DPPC monolayer was studied by surface pressure isotherms and it was observed that the highest cholesterol/DPPC ratio compresses the monolayer. Incorporation kinetics was determined under a 30mN.m<sup>-1</sup> and in the absence of cholesterol no GPI-protein adsorption was observed. A three-step sequence of surface pressure increase was observed for low cholesterol/DPPC ratios (0.66) during GPI-protein adsorption. This result may be attributed to separate adsorption of different MW<sub>r</sub> GPI-protein and/or surface affinities. In cholesterol/DPPC ratios over 0.75, a single step adsorption was observed, which can be explained by the higher surface packing of the monolayer. Key words: *Leishmania*, GPI-anchored protein, biomimetic system.

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