

Supplementary Materials

Modulatory Effects of Acidic pH and Membrane Potential on the Adsorption of pH-Sensitive Peptides to Anionic Lipid Membrane

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1. Figure S1: Changes in 7POPC:3POPG LUVs' Average Diameter as a Function of a Half of Lipid Concentration Induced by the Peptides.

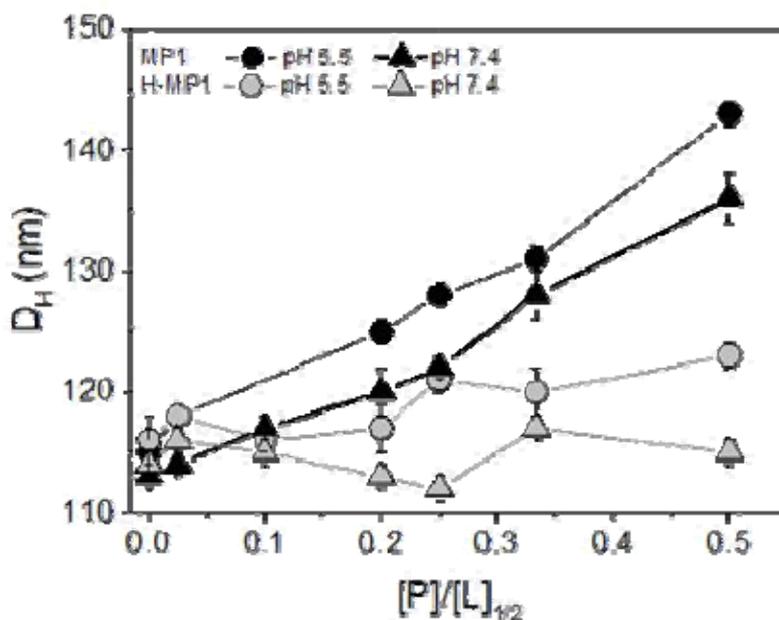


Figure S1. Changes in 7POPC:3POPG LUVs' average diameter as a function of a half of lipid concentration, $[L]_{1/2}$, for MP1 (dark symbols) and H-MP1 (gray symbols). Circles and triangles represent pH 5.5 and 7.4, respectively. All data correspond to the average (\pm SD) of three independent experiments.

2. Figure S2: Representative Fractional Fluorescence Intensity of TRP Residue of MP1.

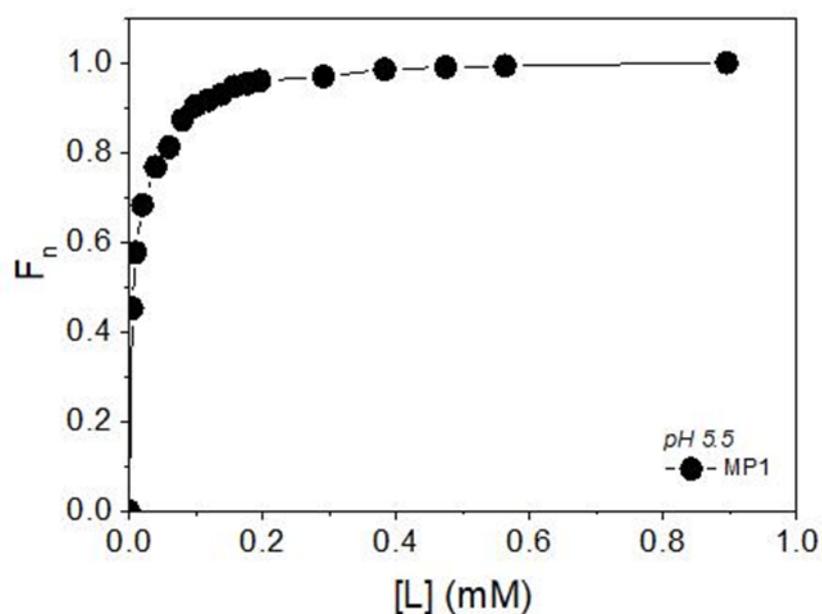


Figure S2. Representative fractional fluorescence intensity of TRP residue of a 2 μM MP1 concentration at pH 5.5 in solution and in the presence of lipid as a function of a half of the lipid concentration, $[\text{L}]/2$.

3. Figure S3: Relative Changes in the Surface Potential of 7POPC:3POPG LUVs as a Function of the Peptide-to-Lipid Molar Ratio for Both Peptides.

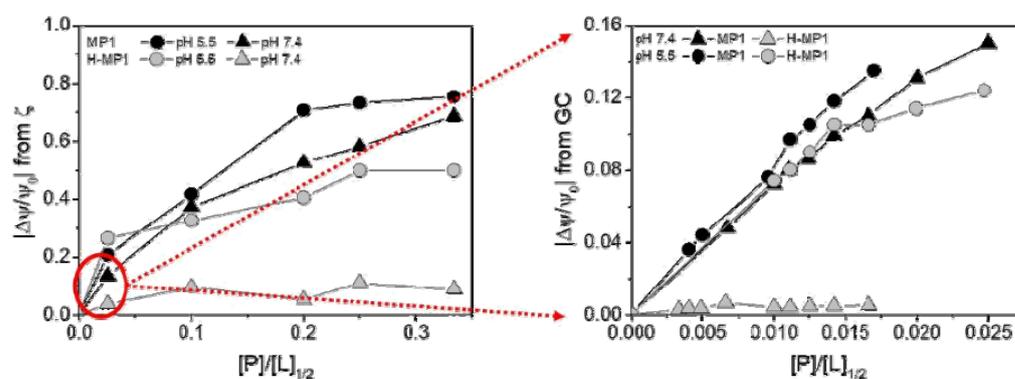


Figure S3. Relative changes in the surface potential ($\Delta\psi/\psi_0$) of 7POPC:3POPG LUVs as a function of the peptide-to-lipid molar ratio for MP1 (dark symbols) and H-MP1 (gray symbols). Circles and triangles represent pH 5.5 and 7.4, respectively. $\Delta\psi/\psi_0$ values were calculated from zeta potential measurements (**left**) and from Gouy-Chapman theory (**right**).

Figure S4: The Radial Distribution Function $g(r)$ of the Residues Pairs Lys-Asp and His-Asp.

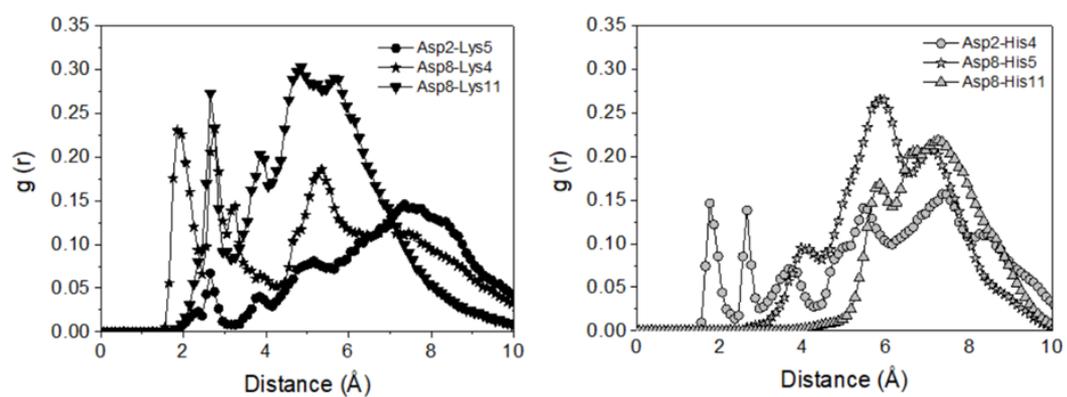


Figure S4. The radial distribution function $g(r)$ of the residues pairs (**left**) Asp-Lys in MP1 and (**right**) Asp-His in H-MP1 adsorbed on the bilayer at pH~5.5.