Synthesis of Lipid Membrane Adhesion Molecules Containing Zwitterions (Ⅵ) -Self-assembly and Membrane Adhesion of Zwitterionic Molecules-

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Phospholipids are major components of cell membranes, and among them, phosphatidylcholine is widely found in plants and animals. Despite the importance of multivalent zwitterions in membrane adhesion[1)], the properties of low-valence zwitterions remain underexplored. This study addresses this gap by focusing on monovalent and divalent zwitterions. Previously, we have successfully synthesized monovalent and divalent zwitterionic molecules with fluorescent dansyl skeleton (Fig1). Based on previous research, we investigated (1) the self-assembly of synthesized zwitterionic molecules and (2) their membrane adhesion properties, focusing on the effect of the valance of the zwitterion.

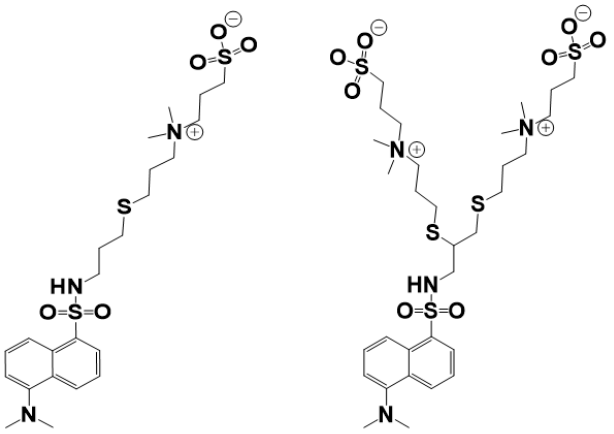

Fig1. monovalent and divalent zwitterionic molecules

1) Xifei Yu, *et al.*, *Nature Materials*, **2012**, *11*, 468-476.