STUDY OF INTERACTION OF S100A9 PROTEIN WITH TETHERED LIPID BILAYER MEMBRANES

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S100A9 protein belongs to the S100 family of protein and is important factor in the regulation of most cellular processes and immune response [1]. It is associated with the development of cancer cells and neurodegeneration. S100A9 protein is involved in the amyloid-neuroinflammatory cascade in Alzheimer's disease [2]. In this work the interaction between S100A9 and membrane was studied and tethered lipid bilayer membranes (tBLM) [3] were used as simplified membrane model for these studies.

The aim of this work was to form tBLM and to optimize their electrical properties in order to use them in the study of the interaction of S100A9 protein with phospholipid bilayer and its mechanism of action. By using Electrochemical Impedance Spectroscopy and Dynamic Light Scattering methods, was shown that smaller S100A9 oligomers are more toxic to the membrane compared to larger aggregates.

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