

Abstract Submitted
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Conformational Change in Fibrinogen on Langmuir Blodgett Clay Monolayer¹ J.S. KOO, T. KOGA, M. RAFAILOVICH, J. SOKOLOV, SUNY at Stony Brook — We have studied the adsorption of the plasma protein, fibrinogen, on two different clay monolayers. Surface pressure-molecular area ($\pi - A$) isotherm measurements, atomic force microscopy (AFM), X-ray reflectivity and grazing incident X-ray diffraction (GID) were used to characterize formation of organo-clay and sodium clay monolayers. These clays serve as model hydrophobic and hydrophilic surfaces, respectively. The overall conformational structure of fibrinogen is dramatically different on organo-clay and sodium clay surfaces. On the sodium clay surface, individual fibrinogen molecules appear globular in shape whereas, on organo-clay, the trinodular structure is most commonly observed. Time dependent studies were also conducted. The results show that uniform multilayer formation occurred only on the hydrophobic surfaces. Fibrillar fibrinogen structures are observed over their uniform bilayers. Non-uniform adsorption occurred on the hydrophilic surfaces.

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