## Abstract

Serine protease thrombin plays an important role in the process of fibrin network formation by converting fibrinogen into fibrin monomer which spontaneously polymerizes to form fibrin network. The aim of this work was to characterize interactions between thrombin and surface adsorbed fibrin(ogen) or fibrin network to which thrombin can bind and initiate grow of the fibrin network. Activity of thrombin bound on fibrinogen or fibrin was determined spectrophotometrically in a relation to cleaved chromogenic substrate. Using the method of surface plasmon resonance fibrin network formation initiated by thrombin bound to fibrinogen or fibrin was observed. These networks were also visualized by atomic force microscopy. Determined value of affinity constant $K_D$ for interaction of fibrinogen in solution with a fibrin network prepared on surface is in agreement with previous experiments in which $K_D$ was determined from interaction of surface covalently bound fibrinogen with fibrin monomers in solution.