In vitro study of T cell migration on substrates with modulated adhesiveness

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Our defense against pathogens relies on the complex and sophisticated orchestration of leukocyte recruitment. This process is mediated by external cues among which the role of adhesion molecules is still only partially deciphered. In this project, patterns of adhesion molecules will be created using light-induced molecular adsorption (LIMA). The first part of the project is dedicated to adapting the LIMA technique to functionalize substrates for specific adhesion molecules ICAM-1. ICAM-1 molecules have been patterned on antifouling surfaces to achieve specific binding and patterned proteins have been quantified using fluorescent antibodies. In the second part of the project, substrates with different adhesiveness have been created, allowing us to investigate the relation between substrate adhesiveness and T cell migration properties.