Abstract

T cells play an important role in both acquired and innate immunity. T cell receptors recognize antigens presented by MHC glycoproteins on cellular surfaces. The binding of the antigen to the T-cell receptor triggers activation signals. This leads to T-cell receptor clustering to microclusters and immunological synapse generation. The IS plays an important role in signalization, co-stimulation, T-cell activation and receptor degradation. This thesis is focused on the process of the T-cell receptor microclusters and immunological synapse formation and how the development in fluorescence microscopy improved our insight into these processes.