Abstract:

Natural killer or NK cells are immunocytes that mediate innate immunity against pathogens and tumors without pre-exposition to the antigen. They are holding rapid antiviral defense during the initial phase of immune response, before starting the production of antibodies and the development of specific cytotoxic T –lymphocytes. On the surface of NK cells is expressed wide range of inhibition and activation receptors. Important family of those receptors are C – type lectin like from which the family of NKR – P1 ("natural killer cell receptor - protein 1") was discovered first.

Diploma thesis deals with the preparation/study of mice NK cell activation receptor NKR-P1C and searching for its binding partner. The soluble form of the protein NKR-P1C was prepared by recombinant expression using the transient transfection of HEK293 cell line (human embryonic kidney 293) with wild type or homogenous glycosylation as IgG – Fc fusion protein, from which was it possible to obtain pure dimer of NKR P1C, after process of affinity purification, TEV protease cleavage and HPLC chromatography. The fusion protein was bound to protein A labeled with a fluorescent probe DyLight 488. Mice tissues and cell lines were labeled by this complex for purpose of seeking ligand.