Primary immunodeficiencies (PID's) are a group of congenital, rare diseases characterized by an increased risk of recurrent severe infections, autoimmunity and malignancy. The largest group of patients are those with impaired antibody synthesis. The most frequently diagnosed antibody deficiency is common variable immunodeficiency (CVID) and the specific antibodies deficiency (SAD) is often diagnosed. Most of the researchers have focused on the number and function of B cells with limited data regarding T lymphocytes in CVID and SAD. γδT lymphocytes, a small subset of T lymphocytes in human peripheral blood, are a bridge between acquired and innate immunity. Literature data indicate that they are one of the key elements in the immune response against several pathogens, neoplasm, and might be involved in the autoimmunity. Those lymphocytes might present with both pro- and anti-inflammatory properties. They have recently become popular as a target for cancer immunotherapy. As such, γδT lymphocytes have become the source of our interest in PID's.

To the best of our knowledge, our study will be the first to assess the quantity and quality of γδT lymphocytes in CVID and SAD. We expect that we will show an inverted ratio of major subpopulations of these lymphocytes with overexpression of co-inhibitory molecules. Moreover, we assume that γδT lymphocytes in PID patients might have impaired cytotoxic functions, manifest a negative influence on the production of antibodies and influence the antigen-specific immune response. Detailed evaluation of γδT cells will contribute to a better understanding of the immunopathogenesis of CVID and SAD.