The pathology of immune system can lead to immune disorders. Immunodeficencies are caused by insufficient or missing immune response. On the other hand, allergies and autoimmune disorders represent a consequence of wrong control of the immune reaction and breakdown of an immune tolerance. Immunopathogenesis of allergic and autoimmune diseases are to some extent common to both immunopathologies; both represent harmful hypersensitive reaction to autoantigen or allergen and lead to the destruction of tissues and organs or to their dysfunction. Allergy and autoimmunity result from the combination of internal, mainly genetic, and external factors, such as infection. In this thesis, we focused on the mechanisms that lead to the disorders of regulation of immune reaction. We studied cohorts of patients with allergy or autoimmunity and we concentrated first on the genetic omponents that underlie both immun opathologies, furtheron mechanisms of innate immunity, particularly dendritic cells and finally on the adaptive immunity, mainly B cells and antibodies. One of our projects presented our experience with the therapy influencing B lymphocytes using monoclonal antibody against CD20 (rituximab). In summary, our studies present a complex view on immune reactions that contribute to allergic and autoimmune diseases. Our main findings are concentratedon dendritic cells. We documented specific finding of subsets of endritic cells in bronchoalveolar fluid in patients with asthma. In an rea of autoimmune disease, we show alterations of dendritic cells in type I diabetes which can contribute to the pathogenesis of the disease. The thesis is composed from two parts, in the first general and review part we discuss disorders of the immune regulation; in the second research part we present the discussion of our results.