

Inflammation is one of the most important immunological mechanisms that protect animals from diseases. In my thesis I summarized information on changes in gene expression in tissues in the course of the inflammatory immune response in birds. I tried to describe the main features of the immune response in birds and highlight the differences to other vertebrates, especially mammals. I focused mainly on the surface molecules of various types of immune cells, as well as on signalling by soluble factors called cytokines. Although in general features are the inflammatory reactions in birds and mammals similar, in my thesis I have shown that a large portion of mediators and signalling molecules work very differently in these two vertebrate groups (e. g. the TNF SF-mediated pro-inflammatory signalling) and that substantial variation may be found even between different species of birds.