Abstract

This thesis focuses on humoral immune response of specific hosts to antigens of various developmental stages of bird schistosomes *T. regenti* and *T. szidati,* and follows up on previous research of antibody response in non-specific hosts (mouse, human). Sera of experimentally infected and hunted-down wild ducks were examined using the ELISA and western blot methods. The sera samples were taken in predefined intervals. Results of the ELISA analysis show the process of humoral immune response after infection by bird schistosomes. The level of specific antibodies IgY against homogenate of *T. regenti* cercariae increased significantly 20 d.p.i. in ducks infected by *T. regenti*. Such reaction wasn't observed in ducks infected by *T. szidati*. Slight changes in level of specific antibodies IgM against *T. szidati* cercariae homogenate were observed 10 d.p.i. only in fully immunocompetent ducks and in reinfected ducks. Examination of hunted-down wild ducks didn't prove infection by bird schisosomes; this conclusion was confirmed by results of the ELISA analysis.

IgY antibodies from ducks infected by *T. regenti* demonstrated strong reactions with 2 antigens in ranges 49-47 kDa and 47-45 kDa. Other reactions, which were recognized, have not been observed in all specimen. An Western blott with homogenate from 7 days old *T. regenti* schistosomula as an antigen demonstrated a specific reaction to antigens with molecular size 37 kDa and 18 kDa. All sera of examined ducks infected by *T. regenti* as well as *T. szidati* including control groups showed non-specific reactions to recombinant cathepsin CB2. Recombinant cathepsin CB1.1 was recognized only by some sera but all of them belong to infected ducks. Fabrication of recombinant triosephosphate isomerase, which was strongly immunogenic in previous experiments, is in the stage of cloning in an the expression system of *Escherichia coli* cells.