

Thesis Title                    Histological Changes in the Liver, Spleen,  
   Mesenteric Lymph Nodes and Intestines of  
   Mice Infected with *Schistosoma japonicum*  
   and *Schistosoma mekongi*

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#### ABSTRACT

*Schistosoma japonicum* (Chinese) and *S. mekongi* cercariae were applied to the shaved abdominal skin of anaesthetized mice. Each mouse was infected with approximately 60 cercariae. At 10 and 12 weeks post-infection, various organs were removed for examination by light microscopy. Histopathological changes were observed in the liver, spleen, mesenteric lymph nodes, and intestines of infected mice. Adult worms were found residing in the superior mesenteric and portal veins. Schistosome eggs were distributed in various infected

organs: the liver, mesenteric lymph nodes, and intestines. Granulomas were formed after these eggs stimulated immunological reaction by the host. Granulomas were mainly composed of leukocytes, macrophages, fibroblast, and lymphocytes; they have approximately the same size in various infected organs. Following *S. japonicum* (Chinese) infection, granulomas were more densely distributed in the small intestine than in the liver and large intestine. In contrast, after *S. mekongi* infection granulomas were more densely distributed in the liver than in the intestines. Eggs were also seen in the lumen of the terminal ileum and ascending colon. They were concurrently found penetrating the surface epithelium of the terminal ileum and colon. Degeneration of the epithelial cells in the intestines were not observed. In addition, amyloid deposits were found in the extracellular space and in the wall of blood vessels in the liver, spleen, and mesenteric lymph nodes. Following granuloma formation and amyloid deposition, collateral blood vessels, dilatation of sinusoids and atrophy of hepatocytes were observed in the liver. The splenic cords were compressed, and their lymphoid cells were more closely packed.