

## **Biochemical and hematological parameters of mice infected with *Trichuris muris***

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Trichuriasis is the large intestinal infection promoted by different species of *Trichuris*. These parasitisms have a global relevance, mainly in underdeveloped countries. In the host, the infection can result in conditions of protein malnutrition, anemia and diarrhea, affecting the physical and cognitive development (OMS 2016). The intestinal and systemic alterations caused by this infection, are not still detailed. In present work we aim to understand the main biochemical and hematological changes promoted by the nematode. Male mice (Swiss webster) were infected with 300 eggs of *T. muris*, after were immunomodulated with dexamethasone sodium phosphate and dexamethasone acetate and necropsied 45 days post-infection. During the necropsy, we performed blood collection via cardiac puncture. The samples were analyzed by hematological and biochemical equipment. The blood slides were analyzed using the light microscope. The biochemical results showed a decrease in LDL levels and a slight increase of the total cholesterol, HDL, VLDL and triglycerides. The blood analyzes presents a significant reduction in red blood cells and in the hematocrit, in addition we identified a slight increase in the mean corpuscular hemoglobin concentration (MCHC) and an iron rates decrease only in infected. The leukocyte counting presents a slight eosinophils and monocytes increase and a decrease of the segmented in infected group when compared of the control animals. Our results showed a characteristic changes of the parasitic infection, like as eosinophilia and the anemia caused by trichuriasis. The low iron rates lead suggested that the anemia described in this infection can be an iron deficiency anemia. The decrease in LDL levels had been already reported in infection by another nematode. The interested of our results, is that the slight increase in triglyceride rates as some described in bacterial infection. These and other factors suggested an intimate interaction between of these nematodes and enterobacteria during tissue invasion and colonization. However new analyzes should be performed.

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