

## Decrease in the global blood cell count on mice by *Toxoplasma gondii*

Stéfani Bueno Panza<sup>1</sup>; Amanda Gubert Alves dos Santos<sup>1</sup>; Débora Gonçalves de Mello Sant'Ana<sup>1</sup>; Roberto Kenji Nakamura Cuman<sup>1</sup>; Gessilda Alcântara Nogueira de Melo<sup>1</sup>

<sup>1</sup> Universidade Estadual de Maringá

Toxoplasmosis is a zoonosis with worldwide distribution, caused by the obligatory intracellular parasite *Toxoplasma gondii*. The infection by this parasite can cause an inflammatory response, which may result in an increase of leukocytes in the peripheral blood in the beginning of the infection. This study aimed to evaluate the leukocyte behavior on peripheral blood during the infection by *T. gondii* at different times. For this experiment, 35 C57BL/6 mice were divided into control groups (CG) and infected for 48 hours (G48), 5 days (G5) or 7 days (G7). The infection was induced by oral administration of 100 oocysts of *T. gondii* (ME 49). The animals from CG received water orally. Forty-eight hours, 5 days or 7 days after the infection, the infected groups and their controls were submitted to euthanasia, and blood samples were collected through the sinus retro orbital. The samples were used for global count in hemocytometer and for the differential leukocyte count in blood smears stained by May-Grünwald-Giemsa technique. The statistical analysis was performed and the data were expressed by mean±standart error. The results showed significant decrease between G5 ( $5,005 \pm 751.9$  cells/mm<sup>3</sup>) and G7 ( $2,978 \pm 411.1$  cells/mm<sup>3</sup>) when compared to the CG ( $8,450 \pm 800.5$  cells/mm<sup>3</sup>) on the count of global leukocytes. There was a significant decrease between G5 ( $3,959 \pm 697.2$  cells/mm<sup>3</sup>) and G7 ( $2,309 \pm 296.4$  cells/mm<sup>3</sup>) when compared to the CG ( $7,665 \pm 736.4$  cells/mm<sup>3</sup>) on the count of lymphocytes. There were no significant differences in the number of polymorph nuclear leukocytes among the groups. It can indicate that the host immune response, already suppressed by the *T. gondii*, is not capable to react in front of the infection. Analyzing the results, we can conclude the *T. gondii* decreases global leukocyte and lymphocyte counts, which might indicate an immunosuppression.

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