

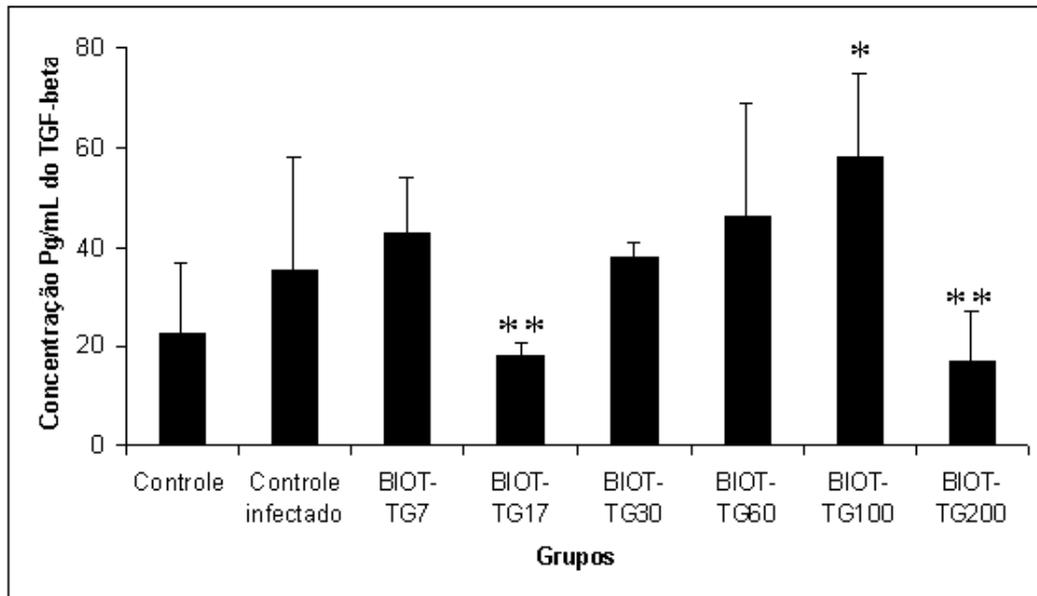
## **Effect of medication produced with cysts of *Toxoplasma gondii* in mice infected with this protozoan**

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Under test blind, controlled, randomized by draw, the effect of different potencies of *T. gondii* biotherapeutic were compared. Fifty-six male mice, Swiss, 60 days-old, were divided into groups according to the treatment: BIOT-TG7, BIOT-TG17, BIOT-TG30, TG60-BIOT, BIOT-TG100, TG200-BIOT, GCInf-infected control group treated with grain alcohol and BCM-7% - non treated and non infected. The biotherapeutics were produced according to the Brazilian Homeopathic Pharmacopoeia, with macerated mouse brain (20 cysts *T. gondii*/100 $\mu$ L). The animals were treated for three consecutive days prior to infection. Groups BIOT-TG7, BIOT-TG17, BIOT-TG30 and BIOT-TG60 and GCInf 0.1mL/4X/day received on the first day and 2X/day on the other days of treatment. For BIOT -TG100 and BIOT- TG200 were used 0.1mL/single dose / day. After 60 days the animals were infected (ME49 strain 20-T *gondii* cysts), orally. Fundoscopy and ocular tonometry were conducted at 55 days post-infection. Sixty days after infection the number of cysts were counted and serum TGF- $\beta$  (ELISA) were dosed. For statistical comparison were used the Kruskal-wallis test, 5% statistical significance and Effect Size Measures. In tonometry, there was no significant difference between the control group and the other groups. Regarding to ocular fundoscopy, it was found that 80% of group BIOT-TG100 did not present amendments and 20% presented mild subretinal hemorrhage surrounding the optic nerve differently from the other groups. In BIOT-TG200 group, 50% of the animals presented mild hemorrhage and 50% remained unchanged. The BIOT-TG200 presented a decrease in the number of cysts in the brain. There was no difference observed between the BIOT-TG100 and the control group. Animal group BIOT-TG100 presented higher ( $p < 0.01$ ) concentrations of TGF- $\beta$  in comparison to BIOT-TG200 group. The highest dilutions BIOT-TG100 and BIOT-TG200 provided more effective benefits, although the levels of TGF- $\beta$  have changed in opposite ways in the two treatments. This result deserves further studies.

**Keywords:** Toxoplasmosis, *Toxoplasma gondii*, biotherapy, TGF- $\beta$ .



**Figure 1.** Serum concentration of  $TGF-\beta$  in different experimental groups. Values are expressed as mean  $\pm$  standard deviation. (\*,\*\*) ( $p < 0.01$ ).



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