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Assessing the cellular and humoral immune response in *Rhipicephalus sanguineus* sensu lato (Acari: Ixodidae) infected with *Leishmania infantum* (Nicolle, 1908)

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Abstract

The aim of this study was to evaluate aspects of the innate cellular and humoral immune response by evaluating hemocyte dynamics, phagocytosis, phenoloxidase (PO) activity and nitric oxide (NO) production in *Rhipicephalus sanguineus* sensu lato (s.l.) (Acari: Ixodidae) infected with *Leishmania infantum* and to assess the persistence of parasites at time 0 and 1, 2, 5, and 7 days post-infection (dpi). The total and differential count of the five types of hemocytes circulating in the hemolymph of *R. sanguineus* s.l. females showed the average