IMMUNOGENIC POTENTIAL OF DIFFERENT CONJUGATIONS FOR P0 ANTIGEN IN BOVINES AGAINST A BRAZILIAN *Rhipicephalus microplus* TICK STRAIN

POTENCIAL IMUNOGÊNICO DE DIFERENTES PREPARAÇÕES DO ANTÍGENO P0 EM BOVINOS CONTRA UMA POPULAÇÃO BRASILEIRA DO CARRAPATO *Rhipicephalus microplus*

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Rhipicephalus microplus is an ectoparasite that affects the cattle industry in tropical and subtropical regions of the world and it is also an important vector for pathogen transmission of important tick-borne diseases such as anaplasmosis and babesiosis. Acaricide resistant populations of *R. microplus* have become a major problem in most of the cattle-producing countries. Vaccination has been practiced as an alternative tick control method to the chemical use. The success of an immunological tick control approach is mainly dependent on the identification of effective tick antigen candidates. Recently, an immunogenic region of ribosomal protein P0 from *Rhipicephalus* spp. ticks that is not very conserved compared to the orthologous protein in their hosts has been identified. A synthetic 20 amino acid peptide from this sequence was effective as a vaccine against *R. sanguineus* infestations in an immunization and challenge experiment using rabbits and dogs. In this study, 18 crossbred cattle distributed in three groups (n= 6 animals per group) were immunized thrice with the P0 peptide chemically conjugated to different carrier proteins plus adjuvant (Montanide). A control group (n= 6 animals) received only the adjuvant. Challenge infestations with approximately 5000 larvae of the cattle tick *R. microplus*/cattle were performed fifteen days after the last immunization. Results showed a significant decrease in both the tick females and respective egg masses' weights. The best results were obtained with the Bm86 protein as carrier, which is a demonstration that the combined use of several immunogens, involved in different physiological.

Keywords: antigen P0, bovino, *Rhipicephalus microplus*, vacina
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