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## Treatment of goat mastitis experimentally induced by *Staphylococcus aureus* using a formulation containing *Hymenaea martiana* extract

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The aim of the present study was to assess the *in vivo* potential of therapy based on *Hymenaea martiana* Hayne extract in mastitis cases among goats that were experimentally induced with strains of *Staphylococcus aureus*. The phytochemical characterization of the plant extract was performed using HPLC-DAD. Ten female goats were experimentally infected with a clinical strain of S. *aureus*. One group was treated with a commercial antimicrobial and another with ointment from natural plant extract. The diagnosis of mastitis was performed using a bacterial culture, SCC, CFU/mL and CMT. Three milk samples were subjected to chromatography to survey the constituents present in the ointment prepared with the plant extract. The results of the HPLC confirmed the presence of phenolic compounds in the chloroform and ethyl acetate. Concerning SCC and CFU/ml, the analysis of variance performed between the experimental periods confirmed that there was a higher score at the time of the first collection after infection in all of the experimental groups. After treatment with ointment containing the extract of H. *martiana* and commercial antimicrobials, these variables returned to values indicative of an absence of intra-mammary infection, based on the international standards for raw goat's milk. In the present study, milk collected on the 32nd day post treatment with ointment containing the extract of H. *martiana* exhibited a significant reduction in CFU/ML, when compared with the control group. Antibacterial activity may be related to the classes of secondary metabolites found.

## Biography

Rodolfo de Moraes Peixoto is a veterinarian, Master of Animal Science (2008-2009) and PhD in Animal Science Tropical by Federal Rural University of Pernambuco (2011-2014). His Doctorate was completed at the age of 31 years old. Since 2009, he is a lecturer and researcher at the Federal Institute of Sertão Pernambucano (IF Sertão-PE). He has 30 articles published in scientific journals in the area of preventive veterinary medicine. His doctoral thesis received an honorable mention and another highlight at a conference in Brazil. Since 2014, he is coordinator of the ethics committee in the use of animals in research of the IF Sertão-PE.

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