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Serological and molecular prevalence of *Babesia bovis*, *Babesia bigemina* and *Anaplasma marginale* in water buffaloes raised in areas of high incidence of ticks

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Lack of information about Mexico for corroborating hemoparasitic infections to wild ruminants led to the present study which is done to determine the prevalence of babesiosis and anaplasmosis in water buffaloes that are raised in areas of high incidence of ticks. A total of 233 blood samples were collected in four buffalo production farms in the gulf coast of Mexico. For the detection of circulating antibodies against *Babesia* spp. and *Anaplasma* spp., the sera were evaluated using the indirect fluorescent antibody test (IFAT) and the enzyme-linked immunosorbent assay (ELISA) techniques, respectively. Molecular analysis of the samples was performed using the nested polymerase chain reaction (nPCR) using specific primers for each hemoparasite species. The overall seroprevalence rate (54.5%, 57.1% and 7.29% for *Babesia bovis*, *Babesia bigemina* and *Anaplasma marginale*, respectively) and molecular evidence (39.48%, 14.16% and 2.57% for B. *bovis*, B. *bigemina* and A. *marginale*, respectively) that were obtained as results in the present study allow to conclude that the water buffaloes, raised in the four production farms, not only demonstrate the immune system exposure of animals to these hemoparasites species, but also, that they are carriers of the infection caused by B. *bovis*, B. *bigemina* and A. *marginale*, as evidenced by the detection of specific circulating antibodies and hemoparasites DNA, respectively.

Biography

Julio V Figueroa is currently working as a researcher and head of the National Research Center for Veterinary Parasitology, INIFAP, in Jiutepec, Morelos, Mexico. He obtained his Veterinary Medicine Degree from the State of Mexico Autonomous University in Toluca, Mexico, and the MSc and PhD degrees in Veterinary Pathology and Microbiology at the University of Columbia-Missouri, in Columbia, MO, USA. He has conducted research on tick borne diseases of cattle during the past 30 years and has published over 70 research papers in peer reviewed international journals.

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