

Implementation of detection protocol for the *Trypanosoma vivax*, *Babesia* spp and *Anaplasma marginale* by bovine blood smear technique

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Trypanosomiasis, babesiosis and anaplasmosis are diseases that present their causative agents broadcast and disseminated by several hematophagous arthropods in the Americas. These diseases produce a large economic impact, since both acute and subclinical form lead to a considerable under-exploration of natural resources and low level of livestock production. They are found in several Brazilian States, the trypanosomiasis being endemic at the Pantanal Mato-Grossense and the babesiosis distributed throughout the national territory. *Babesia bovis* and *Babesia bigemina*, the etiological agents of babesiosis, are piriform eukaryotic protozoans with complete evolutionary cycle, what distinguish them from *Trypanosoma vivax* because the tick, besides being the main invertebrate host, is considered as the definitive one. In another hand, *Anaplasma marginale* is an obligatory intracellular parasite that lies in the same predilection place as that of *Babesia* spp, which is inside red blood cells. Joint infection of *Babesia* spp and *A. marginale* configures the clinical picture of Parasitic Bovine Sadness (PBS) but either one can generate symptoms of PBS by itself, which are nothing more than the side effects resulting from intense erythrocyte destruction caused in the host. This study aimed to detect, by means of optical microscopy, the presence of these hemoparasites in 520 blood samples of bovine herd of two farms located in the in the southern area of the State of Bahia. Each sample was used in the preparation of smears and the analyses performed in triplets. The method of preparation of the slides was through the "Squash" technique in which a drop of blood was spilled on the main slide and dragged with the help of a slide extension. After the drying of these smears, they were stained by the Panoptic Method. Of the 357 slides analyzed until now, four of them showed red blood cells parasitized by *Babesia* sp, making a total of 1.12%. Since the blood was collected from the sacrococcygeal vein of the animal, which features peripheral circulation, it is believed that the parasite in question is *B. bigemina* and not *B. bovis*, since this species is commonly found in peripheral blood. Trypomastigotes forms of *T. vivax* were still found in 0.3% blood samples. These cytological studies configure a practical method for the detection of these hemoparasites, what could provide the health authorities of the state of Bahia with a parameter for implementation of prophylaxis measures and control of these diseases in this region.

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