Difference and detection of Babesiosis by DNA Molecular characterization

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Babesiosis is a tick-borne with intraerythrocytic parasite that cause piroplasmosis in dogs. Babesia canis (B. canis) and Babesia gibsoni (B. gibsoni) have been known as causative of canine babesiosis(1). Laboratory diagnosis of canine babesiosis is primary based on blood smear. B. gibsoni and B. canis can not easily to differentiate from their size. In chronic infections, organisms may be in such low number that is difficult to find the organisms and their sequence is different from other worlds(2). Polymerase chain reaction (PCR) and Loop-mediated isothermal amplification (LAMP) are common the diagnosis techniques. LAMP is a rapid, sensitive, and specific diagnosis method(3). The present study that the target gene of detection by 18S rRNA gene. The 18S rRNA gene have a high conserve in canine babesiosis, so it is difficult to differentiate between B. canis and B. gibsoni(4). I try to develop different target genes by reducing the mistake and raising specifically, and study the LAMP to detect B. gibsoni. The result of the P18, P50, HSP70 gene have high specifically in diagnosis and the LAMP is difficult to distinguish B. canis and B. gibsoni by 18S rRNA gene.