Abstract:

Diagnosis of bovine theileriosis was carried out by blood film and polymerase chain reaction-PCR methods. In the current study, Theileria annulata merozoite piroplasm Surface Antigen (Tams-1) target based PCR was used for specific detection of T. annulata infection in cattle from different localities in Upper Egypt then followed by cloning and sequencing of this gene then alignment of all obtained sequences and their translated amino acids to studying its polymorphism among different local strains. The results of this study concluded that blood film is still important for diagnosis, (Tams-1) target based PCR test was more sensitive than blood film. The infection rates with T. annulata in the examined cattle were 46.19% and 28.57% by using Tams-1 target based PCR and thin blood film, respectively. The (Tams-1) gene sequencing, alignment and translation into amino acids concluded that Tams-1 sequences and its translated amino acids were highly variable. This makes it not recommended for use in vaccination and/or serological diagnostic tests. The sequences and their translated amino acids were deposited in the GenBankTM databases and available under accession numbers as following (GenBankTM: KJ021626, GenBankTM: KJ021627, GenBankTM: KJ021628, GenBankTM: KJ021629).

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