Identification of *Trypanosoma evansi* On Horses in Bima, West Nusa Tenggara Province Based on Morphometry and Molecular

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ABSTRACT

Bima is a district located in West Nusa Tenggara Province. This district has many livestock, one of which is horses. Horses have an important role for Bima, including financial and cultural needs. This study has a purpose for the morphology of *Typanosoma* sp. and analyze molecular biology of *Typanosoma* sp. based on the amplification band from the results of the *Polymerase Chain Reaction* (PCR) and the arrangement of the nucleotides that infect horses in Bima. Identification method of *Trypanosoma* sp. done by blood smear method, *Polymerase Chain Reaction* (PCR) and sequencing. Staining of blood smear with 10% Giemsa staining and *Trypanosoma* sp. which was found measured by the ImageRaster application. The PCR method uses ITS1 CF/BR and MP 1/2 primers which are then sequenced. The results of blood tests performed were found in a form similar to the blood parasite *Trypanosoma* sp. proven by confirmation using PCR with primary ITS1 CF/BR and MP 1/2. The results of PCR products were performed electrophoresis and showed amplified band length of 480 bp using ITS1 CF/BR and 362 bp MP 1/2. As for the homologized sequencing results, it was found that *T. evansi* Bima isolates had similarities with *T. evansi* in Egypt, Jepang and in Indonesia. So from that it was concluded that the causative agent of horse Trypanosomiasis in Bima was *Trypanosoma evansi* as evidenced by the morphological similarity in blood pressure and confirmed using PCR and nucleotide sequencing.

Keywords: Bima, Horse, *Polymerase Chain Reaction* (PCR), *Trypanosoma evansi*.