

PARASITOLOGICAL AND MOLECULAR INCIDENCE OF *Trypanosoma evansi* IN DROMEDARY CAMELS OF GUJARAT, INDIA

Bhupendrakumar J. Thakre¹, Binod Kumar¹, Nilima N. Brahmhatt² and Krishna Gamit³

¹Department of Veterinary Parasitology, ²Animal Diseases Diagnosis Laboratory, Veterinary Clinical Complex;

³Department of Livestock Production Management, College of Veterinary Science and Animal Husbandry,

Junagadh Agricultural University, Junagadh-362001, Gujarat, India

ABSTRACT

The present study was aimed to assess the incidence of *T. evansi* infections in camel in Saurashtra region of Gujarat, India, through microscopy and polymerase chain reaction (PCR) methods. Blood samples were collected from 192 camels, randomly. The diagnostic sensitivity and specificity of Field's stain, Giemsa stain and RoTat1.2 polymerase chain reaction (PCR) assays for detection of *T. evansi* in blood samples was evaluated. *T. evansi* infection recorded in camels based on Field's stain, Giemsa stain and RoTat1.2 PCR assays was 3.23%, 8.85% and 22.39%, respectively. Sensitivity of Field's stain was 35.29% while PCR test had 100% sensitivity in comparison to Giemsa stain for the detection of *T. evansi* in blood samples. The analytical sensitivity of newly developed RoTat1.2 PCR assay was determined as 1.07 pg of purified whole blood genomic DNA. Epidemiologically, *T. evansi* was an important pathogen in camels of all age groups but more prevalent in adult animals and in monsoon season.

Key words: Camels, Field's Stain, Giemsa stain, Polymerase chain reaction (PCR), RoTat1.2 VSG gene, Trypanosomosis