**Phylogenetic analysis of kDNA of *Leishmania tropica* in   
Thi-Qar - Iraq**

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**Abstract**

This study aimed to identify of *Leishmania tropica* in Thi-Qar province by amplifying kinetoplast DNA by nested-PCR, and characterized by sequencing and phylogenetic tree. The current study was conducted in Al-Hussein Teaching, Al- Suoq and Al- Shatraa Hospitals in Thi-Qar province south of Iraq for period from December 2018 to September 2019. The results showed 46 positive samples of *L. tropica*. DNA sequences of (n =10) *L. tropica* also showed confirmative genetic detection of local isolates using NCBI-Blast data and phylogenetic tree analysis (Mega 6.0) after comparison with recorded isolates. The local *L. tropica* isolates (IQ.N-No.1-IQ.N-No.10) were showed genetically closed related to NCBI-Blast *L. tropica* (AB678350.1) at total genetic change (0.001-0.004). Analysis of kDNA nitrogen bases sequences showed that all of samples were consistent with those recorded at the NCBI with a ratio of 99%. It obtained NCBI-GenBank MN334661-MN334670 accession number of *L. tropica* kDNA. The molecular characterization and phylogenetic relationship of *L. tropica* isolates have not been studied before in the local area.

**Keywords: *Leishmania tropica,* kDNA*,* phylogenetic tree**