CHARACTERIZATION OF THE *LEISHMANIA AMANOZENSIS* TELOMERE REPEAT-BINDING FACTOR 2 (*LA*TRF2)

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Leishmania amazonensis causes a wide spectrum of clinical diseases without effective control program or therapeutics. Telomeres are specialized structures at the end of chromosomes, essential to maintain genome stability and cell viability. The importance of telomeric proteins for telomere maintenance has lead to their identification in *Leishmania* spp. Here we present the identification and characterization of a *Leishmania* homologue to the mammalian TRF2. In *T. brucei* and mammals, TRF2 bind to telomeric DNA and to other telomeric proteins. TRF2 protects chromosomes against end-to-end fusion and plays a role in *t*-loop formation. LaTRF2 was cloned using a PCR-based strategy. ClustalW and blast2 sequence analysis showed that it shares similarities with their eukaryote counterparts, including a canonical C-terminal DNA-binding Myb-like domain and the TRFH homology domain for homodimerization. LaTRF2 is predicted to be a 80-kDa protein, indicating that it is double the size of the trypanosomes TRF2 homologues. Analysis of LaTRF2 expression by indirect immunofluorescence showed that it is localized at the periphery of the nucleus forming foci. Recombinant full length LaTRF2 and truncated mutants are being expressed in *E. coli* to further structural analysis. The ability of LaTRF2 to interact with telomeric DNA was confirmed by gel shift and chromatin immunoprecipitation assays, indicating that LaTRF2 is a *Leishmania* telomeric protein.

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