

**POLYMORPHIC ALLELES OF THE UNIVERSAL MINICIRCLE SEQUENCE
BINDING PROTEIN (TCUMSBP) LOCUS INFLUENCE THE RNA PROCESSING
IN *TRYPANOSOMA CRUZI*.**

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The Order Kinetoplastida is characterized by the kinetoplast; a mitochondria which presents a peculiar DNA structure. The kDNA is formed by minicircles and maxicircles connected in a net-like structure. The replication of minicircles is not completely understood and most of this knowledge is due to studies in *Crithidia fasciculata*. Individual minicircles is known to contain a dodecamer highly conserved denominated Universal Minicircle Sequence (UMS). The UMS which is the replication origin, binds to the Universal Minicircle Sequence Biding Protein (UMSBP). The *TcUMCBP* gene locus characterized in our laboratory presents two alleles in the *T. cruzi* CL Brener clone, which differs by the presence of the indels containing 62bp and 2,0 Kbp. We have mapped the polyadenylation and trans-splicing sites in the *TcUMSBP* gene locus. The 62bp indel, is localized in the 5' intergenic sequence of the *TcUMSBP* gene and affects the mRNA processing generating two sites of polyadenylation for the upstream gene. We have investigated the sequences involved in the mRNA processing in this locus. We have cloned the 5' and 3' untranslated region (UTR) of the *TcUMSBP* and HSP70 genes in plasmids containing the Chloramphenicol acetyl transferase reporter gene and transfected in *Trypanosoma cruzi*. The 62bp indel results in a differential accumulation of the polycistronic and the mature transcripts originated from each allele. The presence or absence of the 62bp in the *TcUMSBP* intergenic region also revealed different secondary structure, suggesting a role in the control of RNA processing.

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