

CHARACTERIZATION OF THE HEAT SHOCK ELEMENTS IN THE POST-TRANSCRIPTIONAL REGULATION OF HSP70 GENES OF TRYPANOSOMA CRUZI.

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The understanding of chaperone gene regulation will shed light on the mechanisms of post-transcriptional regulation in trypanosomatids. The gene organization and gene expression pattern of HSP70, HSP60 and HSP10 genes of *Trypanosoma cruzi* have been previously characterized by our group and others. Our aim is to investigate the presence of heat shock-responsive elements in the mRNAs of these genes. Plasmids containing the chloramphenicol acetyltransferase (CAT) reporter gene under the control of the 18S rRNA promoter were constructed in which the CAT gene is flanked by of intergenic regions containing either the 5' or 3' UTR of the HSP70 and Rab7 mRNAs. CAT assays of transiently transfected epimastigotes show that heat shock-responsive elements are present in both the 5' and 3' UTRs of HSP70 mRNA. A similar series of reporter plasmids are being constructed with HSP10 and HSP60 sequences. CAT mRNA levels transfected cells are being determined to assess the contribution of mRNA stability and its translation in the induction of the CAT enzyme. We are also determining the half-life of the endogenous HSP10, HSP60 and HSP70 mRNA under stressing and non-stressing conditions. Preliminary results suggest a half-life of about 40 minutes for the HSP70 mRNA under non-stressing conditions.

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