STUDIES ON THE CONTROL OF EXPRESSION OF *LEISHMANIA* PHOSPHOGLYCERATE KINASE GENES

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Leishmania presents two isoforms of phosphoglycerate kinase (PGK), the cytosolic (PGKB) and glycosomal (PGKC) enzymes. PGKB and PGKC open reading frames are 99.5% identical, diverging with respect to the signal peptide present at the 3' end in *PGKC*. Genomic fragments bearing either *PGKB* or *PGKC* genes were cloned into pX63Neo and transfected into *Leishmania* to investigate their impact on growth behavior. We noticed no growth rate differences between transfectants and under high levels of drug pressure (G418), *PGKB* transfectants and control cells bearing pX63Neo with no insert showed a corresponding increase in episome copy number. On the other hand, the copy number of the *PGKC* episome is approximately 1/10th of that observed for *PGKB*. Northern blotting with *PGKC* and *PGKB* overexpressors revealed that transcript of *PGKC* is kept at lower levels when compared to *PGKB*. Nevertheless, relative levels of glycosomal and cytosolic protein isoforms do not correlate positively with their transcripts. Chimeric constructs were engineered to investigate the effect of 5' or 3' UTR of *PGKC* on the phenomenon and Actinomycin D experiments were conducted to evaluate RNA stability in each transfectant. A higher stability of *PGKC* transcript was observed which is not solely dependent on its 3' UTR.

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