

Differential expression of a DNA fragment obtained from in vivo and in vitro propagated parasites of *Trypanosoma congolense*.

Mosonik, N.C.; Murphy, N.B.; Kinyanjui, P.W.; Pelle, R.

Abstract:

Trypanosoma congolense parasites are routinely propagated in vitro in many laboratories for various studies. However it is important to know whether the in vitro propagated parasites express the same genes as the in vivo generated parasites. To address this question procyclic trypanosomes of *T. congolense* IL1180 were isolated from both infected tsetse flies and culture. Total mRNA was prepared from the two types of trypanosomes. The mRNA was used as template to synthesize cDNAs. The cDNAs were subsequently used in randomly amplified differentially expressed sequences (RADES) analysis using oligonucleotide primers of arbitrary sequence. The primers revealed differences in cDNA products generated by the mRNAs from in vitro and in vivo parasites suggesting differences in the genes expressed by the two forms of trypanosomes. Primer 899 amplified a 280 bp in vivo specific product. The product was cloned and used to probe genomic DNA from *T. congolense* IL1180. The product identified a gene that is either single copy with two alleles or a gene that has two alleles and a few tandem repeats. The 280bp DNA fragment was sequenced and analysis of the sequence revealed a gene product with significant homology in one domain to eukaryotic L19 ribosomal gene product