Tandemly linked tRNA^{Gln}, tRNA^{Val} and tRNA^{Lys} genes in *Trypanosoma brucei*

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We have recently identified two tRNA genes contained on a cosmid clone of *Trypanosoma brucei* genomic DNA (1). The sequence of a second, tRNA-hybridizing Hae III fragment (433bp) from the same cosmid clone is presented below. The sequence (determined on both strands using the dideoxy chain termination method (2)) was found to contain three potential tRNA sequences. The tRNA sequences are shown in upper case letters and may be folded to give typical cloverleaf structures. The anticodons (TTG = glutamine(Q), TAC = valine(V), CTT = lysine(K)) are underlined. Consensus RNA polymerase III boxA(TRRYnnAGTGG)/boxB(GTTCRAnCC) promoter elements are shown in bold. The G to C change (nucleotide 293) in the lysine tRNA boxA consensus is conserved in other eukaryotic lysine tRNA sequences (3).

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1
ggccGGTCCT ATAGTGTAGT GGTATCACT TCGGACTTTG AATCCGAAAA CCCAGGTTCC
61                                     Q
AATCCTGGTA GGACCAaatt tttcgttttt gtcaattcac taactatggt gtcttttcac
121
catattgcgg cagtGCGTGG GTGATCTAGT GGTATGATG TCTGCTTTAC ACGCAGAACG
181                                     V
TCGCGGGTTC GAACCCCGCC CGCGTAGcgt tttccagttt gctgctgcgt ctcttcatgt
241
atgggttccga ttaatgaaat tgttgaggaa cacgtaGCCC TTCTAGCTCA GTCGGTAGGG
301
CGCACGGCTC TTAACCGTGT GGTCTGGGT TCGAGCCAC GGGGGGTGct ttttcccgat
361                                     K
ttctctgatt taacttcac aatggggtgc ctcgagtgt gtctcgtaag gcggtgtgat
421
gtgtcaacag gcc

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References:

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3. Sprinzl, M., Hartmann, T., Weber, J., Blank, J. and Zeidler, R. (1989) Nucleic Acids Res. **17**: r1-r172.