

EXPRESSION ANALYSIS OF SIX DIFFERENT PROTEINS IN TWO  
*LEISHMANIA* SPECIES RESISTANT TO GLUCANTIME

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In this work, it was investigated the expression level of the enzymes involved with antioxidant defense (FeSOD-A, iron superoxide dismutase and TRYP, tryparedoxin peroxidase), drug-stress (HSP-70, heat shock protein 70) and metabolism (flavin oxidoreductase /NADH oxidase, LPD, dihydrolipoamide transacylase and ADH, alcohol dehydrogenase) in *L. amazonensis* (PH8 and 10995) and *L. guyanensis* (M9945 WTS and R-21 clones) with different levels of resistance to Glucantime. Initially, amino acid sequences of these proteins from different species *Leishmania* and *T. cruzi* deposited in the Genebank were compared. Alignment showed 31 to 84% identity between *Leishmania* and *T. cruzi* proteins. Protein expression was determined by western blot using polyclonal antibodies raised against recombinant proteins from *T. cruzi*. Antibodies anti-*T. cruzi* also recognized *Leishmania* proteins. Differences in protein profiles were observed between the two species of *Leishmania* analyzed. Expression levels of the six proteins were identical among all samples of *Leishmania* analyzed, independent of drug-resistance phenotype. However, the expression level of FeSOD-A was 2-fold higher in *L. guyanensis* population resistant (R21) compared to its sensitive pair. Further studies are under way to investigate the possible involvement of those proteins with drug-resistance phenotype in *Leishmania*.

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**Key words:** *Leishmania*, drug resistance.