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BQ-27

EVIDENCE FOR A 72 kd SPECIFIC MAJOR SURFACE ANTIGEN IN LEISHMANIA BRAZILIENSIS BRAZILIENSIS

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Leishmania braziliensis braziliensis is the principal causative agent of the mucocutaneous form of leishmaniasis in the New World.

After surface antigen I125 radiolabelling of 10 cloned Bolivian L.b.b. strains, we have studied the SDS-PAGE pattern of the proteins immunoprecipitated by sera of patients infected by L.b.b. Using the same sera, other subspecies and species reference strains of Leishmania were tested as well, namely L. b. panamensis, L. b. guyanensis, L. mexicana amazonensis and L. donovani chagasi. Surface antigens of L.b.b. strains display similar electrophoretic pattern with a microheterogeneity in the high molecular weight antigens which seem to be related to the isoenzymic microheterogeneity. All immunoprecipitated L.b.b. strains present a major 72 kd surface antigen that we failed to detect in the other subspecies and species. Moreover, the major 65 kd surface antigen, although present in the other subspecies and species of Leishmania, cannot be immunoprecipitated by L.b.b. infected sera. On the other hand, controls using L. donovani infected sera precipitate the 65 kd major surface antigen of L. d. chagasi but recognize only slightly the 72 kd surface antigen of L.b.b.

This 72 kd antigen could then be a good candidate for a diagnostic test of L.b.b. infection, which can develop into the serious mucocutaneous form of leishmaniasis.

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COMPARISON OF THE SURFACE AND GENE EXPRESSION PRODUCTS OF TRYPANOSOMA RANGELI AND TRYPANOSOMA CRUZI.

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Trypanosoma rangeli and Trypanosoma cruzi are morphologically similar and share both the same invertebrate host and the same geographic distribution. Although the pathogenicity of T.cruzi is well established, very few is known about the pathogenicity of T.rangeli.

With the aim of establishing biochemical parameters capable of distinguishing these two trypanosomatids and in order to get insight into the gene structure of T.rangeli, we have compared (by 2D-PAGE) the metabolic labelled products and the mRNA in-vitro translation products of T.cruzi and T.rangeli. Our results show that several proteins are conserved. This is in agreement with the hybridisation kinetics of their mRNA which shows a 55% homology.

However, the comparison of the surface-antigens of T.cruzi and T.rangeli shows that while the former presents major polypeptides of 68Kd and 90Kd, the later displays major polypeptides of 64Kd, 74Kd, 84Kd and 100Kd. These surface antigens are not related as judged by immunoprecipitation with antisera specific to each species. These antisera might be useful in characterization and distinction of T.cruzi and T.rangeli.

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