Effect of Sphingolipids Synthesis Inhibitors on *Trypanosoma cruzi*

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Sphingolipids are essential membrane components present in eukaryotic cells, which have been related with several biological processes. *T. cruzi* epimastigotes strain G express mainly glycosylinositolphosphorylceramides (GIPCs), whereas strain CL express a mixture of GIPCs and glycosylinositol phospholipids (GIPLs). In order to better understand the biological role of (glyco)(sphingo)lipids in *T. cruzi* it was analyzed the effect of myriocin (an inhibitor of serine-palmitoyltransferase) and Aureobasidin A (AbA, an inhibitor inositol-phosphoryl ceramide synthase) on parasite growth and glycolipid/sphingolipid expression. In cultures of *T. cruzi* (strain G) grown at 28°C for 96 hours in presence of 10 µM and 30 µM of myriocin, it was observed a significant reduction of epimastigotes growth, an inhibition of about 6% and 25%, respectively. For cultures incubated with 2 µM and 20 µM of Aureobasidin A (AbA) it was observed a growth inhibition of 30% and 84%, respectively. Epimastigote forms of strain CL showed to be more resistant to both myriocin and AbA. No growth inhibition was detected after treatment with 30 µM myriocin and 18 µM Aba inhibited about 34% parasite growth. The glycolipid profile of parasites grown in presence of these inhibitors was analyzed by thin layer chromatography immunostaining using the monoclonal antibody BST-1, directed to glycolipids purified from epimastigotes. The glycolipid profile was also analyzed after alkali treatment. Preliminary results show that strain G epimastigotes, grown in presence of 30 µM myriocin present glycolipids labile to alkali, indicating that these parasites start synthesize glycolipids with alkylacylglycerol. The fine structure of glycolipids and their reactivity with BST-1 are under study.

Key Words: *Trypanosoma cruzi;* myriocin; Aureobasidin A; Sphingolipids; glycosylinositolphosphorylceramides

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