

BIOCHEMICAL IDENTIFICATION OF BIOTINYLATED PROTEINS IN THE ADULT WORMS OF *Schistosoma mansoni*

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Schistosomiasis is endemic disease in many areas of tropical countries, caused for trematode of genus *Schistosoma*. This helminthiasis has been one of the most prevalent diseases that infect humans. Biotin-containing proteins are found in several forms of life. After 1991, evidence for the presence of gluconeogenesis in *Schistosoma mansoni* was observed in adult worms of parasite. Four gluconeogenic enzymes were demonstrated in adult worms of *S.mansoni* and two of those were carboxylases, which must contain biotin as prosthetic group in their structures. Biotin-containing enzymes catalyze reactions in which a carboxyl group is transferred between substrates, occurring then carboxylation, decarboxylation, or transcarboxylation. In this work, 2-D electrophoresis, followed by blotting biotin-streptavidin-HRP conjugate was used in the detection of the biotinilated polypeptides. Image Master 2D Platinum Software (Amersham Biosciences[®]) was utilized for analysis of the gel and nitrocellulose images. Analytical gels were prepared by matching the images from 2-D electrophoresis with blotting. The results demonstrated the presence of several biotinilated bands in the range of 20 to 45 kD. Apparently, some bands are isoforms from the same protein having identical molecular weight and different isoelectric points. The identified bands were removed from the gels and processed to be analyzed in a MALDI-Tof system.

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