Characterization of 14-3-3?2 Isoform from *Echinococcus granulosus* Larval Stage.

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Cystic hydatid disease is a chronic parasitic disease caused by the larval stage (hytatid cyst) of the tapeworm *Echinococcus granulosus*. Hydatid cysts develop in the viscera of intermediate hosts (domestic ungulates and primates, including man), and produce pre-adult forms (protoescoleces) infective for the definitive hosts (canids). Proteins of the eukaryotic 14-3-3 family are highly conserved in evolution and play important roles in many cellular functions. By interacting with several key-signalling molecules, they regulate intracellular signal transduction events, some of which may be involved in key host-parasite interactions. In *E. granulosus*, five 14-3-3 proteins have been identified so far, three of the ? isoform and two of the e isoform. The aim of the present work is characterize *E. granulosus* 14-3-3?2 isoform identifying its interaction partners and expression pattern in the parasite. To functionally characterize the *E. granulosus* 14-3-3?2 isoform its complete coding sequence was cloned into a modified pGEX expression vector (pGEX-TEV), expressed in *Escherichia coli* as a fusion with GST, and recovered by TEV protease digestion. The recombinant Eg14-3-3?2 was used to immunize rabbits and produce an isoform-specific antiserum. Western blotting analysis showed the expression of 14-3-3?2 in different hydatid cyst components (cyst wall, protoscoleces, and hydatid fluid). Imunoaffinity experiments with immobilized recombinant Eg14-3-3?2 are being carried out to recover interacting proteins from *E. granulosus* extracts. Recovered proteins will be identified by mass spectrometry. Immunohistochemistry analyses will also be performed in order to determine the Eg14-3-3?2 expression pattern in different parasite tissues. (CNPq, FAPERGS)

Key words: *Echinococcus granulosus*, hydatid disease, metacestode, 14-3-3 proteins, host-parasite interaction.