

5'-UTR and differential expression of *Echinococcus granulosus* antigen B genes

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Echinococcus granulosus is the etiologic agent of one of the most important zoonosis, distributed worldwide: Cystic Hydatid Disease (CHD). CHD affects humans, a range of livestock species (bovine, ovine and swine), as well as wild ruminants and macropods. The metacestode fluid contains an extremely abundant lipoprotein, called Antigen B (AgB). It is encoded by a multigene family, with five already characterized genes (*AgB1*, *AgB2*, *AgB3*, *AgB4* e *AgB5*). In spite of their importance, little is known about the flanking region of these genes. To isolate the 5'-UTR region of four subunits (*AgB1*, *AgB2*, *AgB3*, *AgB4*) we adopted the GeneRacer™ (Invitrogen) technique. The 5-UTR was amplified using specific AgB primers for each subunit. The PCR products were purified, cloned and sequenced. The analysis of 96 recombinants clones (24 for each subunit) disclosed no variants for *AgB1* and *AgB2* and 2 variants for *AgB3* and 6 variants for *AgB4*. Analyzing the 5'-UTR of all subunits we observed a length of approximately 45 bp and the presence of (GT)_n repeats which is variable depending on the AgB subunit (*AgB1*: (GT)₃, *AgB2*: (GT)₄, *AgB3*: (GT)₉, *AgB4*: (GT)₁₅). To test the hypotheses of differential expression of each subunit we carried out Real-time PCR analyses. We analyzed 11 isolates, and in two of them we analysed RNA from both germinative layer and protoscoleces. The results indicated that *AgB3* is the most expressed in protoscoleces and *AgB1* is the most expressed in geminative layer. Further studies will be done to better understand the relationship between 5-UTR and their possible interaction with proteins.

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