

Cloning and heterologous expression of a novel cysteine protease from *Fasciola hepatica* newly excysted juveniles

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Fasciola hepatica (liver fluke) is the causative agent of fasciolasis a disease of great veterinary importance but that also has significance in human medicine. Improved diagnostics and a vaccine are currently sought for this important parasite. The predominant strategy within the research community to achieve these highly set goals is that molecules of parasitic origin, which interact closely with the host's immune system, are selected to identify and analyze further. Among these parasite-host interacting molecules are proteolytic enzymes, proteases that have been implicated as important for parasite invasion and/or parasite immune system evasion. In order to expand or knowledge about the proteolytic enzymes in *F. hepatica* we employed a 3' RACE cloning strategy based upon degenerate PCR primers for the amplification of cysteine proteases using cDNA from newly excysted juveniles, the migratory life-stage responsible for host invasion. Several amplicons were cloned and sequenced. 5' RACE was performed for two clones and the full-length transcripts were sequenced. Here we present the results from primary expression studies performed from one of the clones, that has by sequence database comparisons been characterized as a *F. hepatica* cysteine protease.