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ENOLASE IN THE INTESTINAL HELMINTH INFECTIONS: THE CASE OF THE *ECHINOSTOMA CAPRONI*-MICE MODEL

Sotillo J.[1], Pérez-García A.[1], Bernal D.[2], Sanchez del Pino M.M.[3], Valero L.[3], Esteban J.G.[1], Marcilla A.[1], Toledo R.[1]

[1]Dep. Biología Celular y Parasitología, Facultat de Farmàcia, Universitat de Valencia, Valencia, Spain;
[2]Laboratorio de Proteómica, Centro de Investigación Principe Felipe, Valencia, Spain;
[3]Dep. Bioquímica y Biología Molecular, Facultat de Ciències Biològiques, Universitat de València, Valencia, Spain.

Echinostomes are intestinal parasitic trematodes which do not migrate within the tissue of their definitive hosts. These parasites have been extensively used as experimental models for the study of the host-parasite relationships. Our group has employed the model *Echinostoma caproni* (Trematoda: Echinostomatidae)-rodent to gain further insight in the molecules involved in the host-parasite interface that may be of importance to determine the course of the infection. This is based on the observation that *E. caproni* develops chronic or acute infections depending on the rodent host used (mice or rat, respectively). In the present study, we identify the enolase as the most immunogenic molecule of the excretory-secretory products (ESP) of *E. caproni* infected mice and we also report on the molecular cloning and characterization of this protein.

Antigenic proteins of *E. caproni* ESP were investigated by immunoproteomics. ESP of *E. caproni* separated by 2-D gel electrophoresis were transferred to nitrocellulose membranes and probed with different mice immunoglobulin classes. Enolase was recognized in 8 different spots of which 7 of them were detected in the expected molecular weight and were recognized by IgA, IgG or IgG and IgG1. Another spot identified as enolase a 72 kDa was recognized by IgM. Digestion with n-glycosidase F rendered a polypeptide with a molecular weight similar to that expected for enolase. Molecular cloning and in vitro expression in *Escherichia coli* of *E. caproni* enolase allowed us to determine that the protein contains 431 aminoacids and a theoretical MW of 46 kDa. The recombinant protein binds specifically to human plasminogen in vitro, confirming its properties as a host-interacting protein.

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