recent and distant toxocariasis, and particularly to ruling out (by high avidity) a recently acquired infection.

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58.023

Characterization of proteins of excretion/secretion (ES) of nematode parasite *Mammomonogamus laryngeus*

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**Background:** *Mammomonogamus laryngeus* is a hematophage nematode parasite that affects the respiratory tract of domestic mammals. The female and male are united in permanent copulation producing a distinctive “Y” form. So far, over 100 cases of human infection had been reported in the scientific literature. In Colombia in 2006 we reported the first case of human infection in the Quindio region, and the second report in bovine livestock with a high prevalence of 14.5% (Fig. 1).

**Methods:** The protein profile of excretion/secretion (ES) of *M. laryngeus* was determined by SDS-PAGE electrophoresis and the characterization of the enzyme activity was evaluated with a zymogram using casein and gelatin dissolved in 20 mM sodium phosphate buffer at pH 7.4 and copolymerization with polyacrylamide 10% and to 0.8% bisacrylamide, 1.5 M Tris- HCl, pH 8.8. The protein concentration was determined by bicinchoninic acid assay (BCA). To evaluate the type of protease on the ES proteins, a zymogram assay was performed with and without specific protease inhibitors (leupeptin trifluoro acetate, EDTA, pepstatin A, 4-2 amino ethyl benzene sulfonyl fluoride Hydrochloric (AEBSF) and N-tosyl-L-phenylalanine chloromethyl ketone (TPCK)) in 10% polyacrylamide gel and gelatin as substrate. To evaluate the effect of pH on the protein activity, the zymogram conditions were performed on pH from 4 to 11.

**Results:** The products of ES from adult *M. laryngeus* have protease activity showing four bands with molecular masses of 94.4 kDa the most dominant and a diffuse series of bands of 122 kDa, 108 kDa and 72 kDa. The *M. laryngeus* ES shows a protease activity. For the specific family of proteases, a metalloprotease activity was found corresponding to the inhibition of protease activity by EDTA but no under other inhibitor. The pH did not change the protease activity over the range tested.

In the micrograph are observed *Mammomonogamus laryngeus* specimens in copula permanent.

**Conclusion:** Our findings, suggest that maybe this ES proteins are involved in skin penetration process and migration through connective tissues in the host, therefore, it is mandatory to obtain more data about this parasite for the understanding of its infective process, and also look for ES homologies within the same family of nematodes for the searching of vaccine candidates and treatment strategies.

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58.024

Fibronectin increases the adherence of *Taenia solium* oncosphere in CHO-K1 cells *in vitro*

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**Background:** Neurocysticercosis is the infection caused by the larval stage of *Taenia solium* and is also the most common parasite of the nervous system in humans and is a public health problem in poor areas of Latina America, Asia and Africa and it is spreading worldwide due to increased migration of NC cases and tapeworm carriers. *T. solium* eggs contain an oncosphere that is released and penetrates in the host small intestine. This mechanism is not known. Therefore, the elucidation of the molecules involved in the parasite-host cell recognition process is of extreme importance and that constitute a focal point of research. Previous works supported the idea that parasites can interact with extracellular matrix and basement membrane proteins, such as fibronectin (FN), laminin, collagen and vitronectin leading to enhanced adherence. The purpose of this study was evaluated the role of FN in the adherence mechanism of *T. solium* oncosphere using *in vitro* assay in CHO-K1 cell.

**Methods:** The *T. solium* oncospheres and CHO-K1 cell monolayer were incubated with different concentrations of
FN (70, 80, 90 and 100 ug/ml) and the adherence was visualized by immunofluorescence using hyperimmune rabbit sera against *T. solium* activated oncospheres. In the other hand, only the CHO—K1 cells were preincubated with 80 ug/ml of FN for 20 h and then the *T. solium* oncospheres with and without FN were added on monolayer cell. FN fibrils and oncospheres were visualized by immunofluorescence using polyclonal anti-FN antibody produced in rabbit by UV light microscopy.

**Results:** The adherence of *T. solium* oncospheres was increased from 70 ug/ml FN versus control. The fibrillar FN matrix on CHO—K1 cells were visualized over monolayer cell. Also, the adherence *T. solium* oncosphere with FN preincubate reacted with anti-FN antibody but with minor intensity versus control.

**Conclusion:** These results suggest that Fn increases the adherence of oncosphere of *T. solium* serving as a bridge between the *T. solium* oncosphere and cell. Additional characterization of *T. solium* oncosphere fibronectin binding protein that interact with host components, will further our understanding of the adherence and could be markers as candidate vaccines.

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58.025

Ectopic knee tungiasis and historical aspects in Peru

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**Background:** Tungiasis is a zoonotic ectoparasitism caused by the penetration of the female sand flea *Tunga spp.* into the skin. It can be caused by two species: *Tunga penetrans* or *T. trimamillata*, and affects commonly distal lower extremities of individuals living in poverty-stricken villages or suburban areas. Although it has been a well known entity to Peruvian physicians and other care providers alike for centuries, little is known about its current epidemiology.

**Methods:** We present a rare case of knee tungiasis which was diagnosed by excisional biopsy. Briefly, the patient was a 7 years old mestizo female with no significant PMH, who lived in Villa El Salvador, Lima, a district with high poverty index. She complained of a painful nodule in her right knee that was noticed 3 weeks prior. Her dwelling was made of straw mats and lacked electricity and water supply.

**Results:** On physical examination, a 0.5 cm tender nodule with a central black dot was noticed in the extensor aspect of her right knee, surrounded by a whitish halo and mild redness around it. On microscopic examination, the epidermis showed hyperplasia, hyperkeratosis, parakeratosis, and a hemorrhagic area in the dermis. Multiple structures compatible with eggs in different stages of development (arrow heads) (Figure) were compatible with *Tunga spp.*

**Conclusion:** To our knowledge, our case is the first human tungiasis located in the knee. Evidence of tungiasis in Peru dates back before the Inca civilization and the Conquest of the Americas. Pre-Columbian, autochthonous inhabitants of the coast depicted tungiasis on mud pottery called *huacos*, as can be appreciated in anthropomorphic ornaments. Moreover, the first references in the local literature were made by the Peruvian Indian Guaman Poma de Ayala (1535/1619). Epidemiological data are scanty: a search on PubMed, Scielo, LILACS and MedLine produced no articles on epidemiology of tungiasis in Peru, except from a letter concerning the new species, and an isolated case report. With the description of a new species of *Tunga* and several Brazilian epidemiologic studies, tungiasis has regained the interest of the scientific community. Epidemiological studies with identification campaigns to understand the status of this ancient parasitism in Peru is our next step.

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58.026

Blastocystis hominis infection among patients with and without gastrointestinal disorders

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**Background:** Blastocystis hominis is a common microscopic parasite found in human fecal samples both from symptomatic patients and from healthy people. The aim of this study was conducted to investigate the epidemiology and clinical features of Blastocystis hominis among Iranian patients with and without GI symptoms.

**Methods:** Six hundred and seventy patients without GI and 670 patients with GI symptoms recruited during 2006-07. Standard microscopic examinations following in vitro culture were used to examine the stool samples for presence of trophozoites and cysts of *B. hominis.*

**Results:** Infection with *B. hominis* occurred most commonly in those with GI symptoms (5.67%) compared with those patients without GI symptoms (3.43%). The most common symptom in case group was abdominal pain (86.84%). *B. hominis* was mostly found with *Giardia lamblia* in case group and with *Entamoeba coli* in control group. In addition, there was no significant relation between the presence of GI symptoms and the incidence of *B. hominis.*