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Abstract

## Western Blot to Diagnose Invasive Amoebiasis. A Biotechnological Development

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**Abstract:** *Entamoeba histolytica* infects 50 million persons worldwide and cause 50,000 to 100,000 deaths yearly. Intestinal Invasive amoebiasis induces dysentery with trophozoites and cysts in feces; the amoebic liver abscess is the most frequent manifestation of extra intestinal amoebiasis. Parasites detected in feces diagnose intestinal amoebiasis, but patients with amoebic liver abscess frequently do not release amoebas in stool. Amoebic liver abscess is diagnosed by ultrasound or computed tomography and serological tests. Here we present a biotechnological development to diagnose invasive amoebiasis using preserved antigenic molecules without enzymatic inhibitors. The amoebic antigenic extract was resolved by SDS-PAGE and transferred to nitrocellulose membranes. Each membrane strip was incubated with sera from patients with amoebic liver abscess; sera from patients with intestinal amoebiasis or sera from clinically healthy volunteers. We identified six antigenic amoebic immunodominant bands, recognized exclusively by the antibodies from patients with ALA, but not recognized by the antibodies present in the sera of healthy people without amoebiasis living in endemic zones, neither sera from individuals with intestinal amoebiasis. These antigenic bands constitute a WB pattern to diagnose invasive amoebiasis. The WB diagnostic test to invasive amoebiasis is useful in amoebiasis endemic zone. The project was supported by PAICYT, UANL.

**Keywords:** Amoebiasis, diagnosis, western blot, *Entamoeba histolytica*.

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