ROLE OF FIBRONECTIN AND GLYCOSPHINGOLIPIDS IN *Paracoccidioides brasiliensis* ADHESION TO HUMAN FIBROBLASTS

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In order to better understand the adhesion of *Paracoccidioides brasiliensis* to lung tissue, binding of yeast forms to lung fibroblasts and their extracellular matrix was studied. It was observed *P. brasiliensis* binding to lung fibroblasts and its Triton-X100 insoluble fraction. By SDS-PAGE and immunoblotting, it was verified that the major extracellular protein present in these fibroblasts is the fibronectin, and it may have a central role in *P. brasiliensis* adhesion. Since human lung fibroblasts express GM1 and GM3, and when these cells were incubated with antibody anti-GM3 or cholera toxin B subunit (which binds specifically to GM1) a significant inhibition of fungi adhesion was observed (35% and 33% respectively), the binding of glycosphingolipids to *P. brasiliensis* was analyzed. Binding of GM1 to yeast forms of *P. brasiliensis* was confirmed by immunofluorescence. It was also demonstrated that *P. brasiliensis* binds to plates coated with galactosylceramide, lactosylceramide, trihexosylceramide, GM1, GM3, GD3 and GD1a. Conversely, no binding was detected when plates were adsorbed with glycosphingolipids which contain terminal N-Acetylgalactosamine residue, such as globoside, GM2 and asialo-GM2. These results strongly suggest that GM3 and GM1 expressed in lung fibroblasts are involved in infection by *P. brasiliensis*.

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