

Characterization of immunogenic peptides from *Sporothrix brasiliensis*

JOSÉ ROBERTO FOGAÇA DE ALMEIDA¹, GRASIELLE PEREIRA JANNUZZI¹, GILBERTO HIDEO KAIHAMP², SANDRO ROGÉRIO DE ALMEIDA¹.

¹Department of Clinical and Toxicological Analysis, Faculty of Pharmaceutical Sciences, University of São Paulo.

²Department of Biochemistry, Institute of Chemistry, University of São Paulo.

Sporotrichosis is a subcutaneous mycosis, caused mainly by fungi *Sporothrix schenckii* and the new specie *Sporothrix brasiliensis*, which was responsible for the first outbreak of sporotrichosis in Rio de Janeiro. It was reported, in previous studies that a monoclonal antibody, called P6E7, against a 70 kDa glycoprotein (gp70) reduced the fungal burden in mice infected with low virulent *S. schenckii* M-64 strain. It was showed lower presence of gp70 in cell wall of *S. brasiliensis* and higher virulence, being lethal in experimental esporotrichosis. The development of novel therapeutic approaches against sporotrichosis, caused by *S. brasiliensis*, are needed like vaccination with induction of cell-mediated immunity. Our work characterized the immunogenic peptides of *S. brasiliensis*. We found, in fungus somatic protein, around 60 proteins in the 2D gel analysis. In the western blot, using P6E7 Mab and the serum of mice infected with *S. brasiliensis*, 16 spots were selected and excised from the 2D gel and analysed by mass spectrometry. Through the *S. brasiliensis* database, 34 proteins were identified, which were analysed peptides with a higher degree of engagement with MHC class II. The predictions programs, IEDB Analysis resource and pred Balb/c, were used selecting the peptides with the lower IC50_Smm and IC50_nn in IEDB program and higher than 9,5 in pred Balb/c program. It was selected 8 peptides for synthesis. Lymphoproliferation assay will be done, with the peptides synthesized. The positives lymphoproliferation peptides will be selected to be evaluated in prophylactic and therapeutic treatments models in experimental sporotrichosis. This approach can aid the developing of new treatment for others fungus, like *Sporothrix brasiliensis*, that increasing incidence of resistance to antifungal drugs and causes severe disease in humans.

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