

TITLE: IMPORTANCE OF TWO EXOANTIGENS IN THE SEROLOGY OF PARACOCCIDIOIMYCOSIS FROM MATO GROSSO

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ABSTRACT:

Paracoccidioidomycosis (PCM) is a serious systemic disease caused by fungi belonging to the Paracoccidoides complex. It has been reported only in Latin American countries, such as Argentina, Venezuela, Colombia, and Brazil. In Brazil we have been focused on the Central West region, which has a regional exoantigen (ExoAg-MT) and frequent cases of *Paracoccidoides lutzii*. The following cryptic species of the fungus *Paracoccidoides brasiliensis* has been reported: S1, PS2, PS3, PS4, and recently discovered new specie, *P. lutzii*. Despite alternatives such as CFA (cell free antigen), exoantigen-based method remains the most useful method for serological identification of antibodies specific to PCM. The objective of this study was to determine the percentage of reactivity of sera of patients from Mato Grosso to two exoantigens: standard (B-339) and regional (ExoAg-MT). Serology for PCM was performed for 467 patients using two types of antigens: Exo Ag B-339 (*P. brasiliensis*) and Exo Ag-MT (*P. lutzii*). Serum samples of patients from the Julio Muller University Hospital (reference in diagnosis and treatment of PCM in the state) and the Central Public Health Laboratory (Lacen-MT) were analysed between April 2012 and April 2017. Radial double immunodiffusion (IDR) was performed in agarose gel at the Research Laboratory of the Federal University of Mato Grosso. A total 467 samples was analysed in the experimental period (2012 to 2017). Of these, 174 (37,3%) were reagentes. Most of them (67,8%) reacted only with ExoAg-MT, some (27,2%) reacted with the ExoAg B-339, and a few (7,0%) reacted with both exoantigens. The studies confirm the importance of exoantigens for the detection of antibodies to *P. brasiliensis* and anti *P. lutzii*. The concomitant use of both MT exoantigens, especially in patients from MT (high reactivity) and B-339 exoantigens (low reactivity), increase the chances of detecting these antibodies to PCM, which, according to previous studies, observed a high antigenic variability. In this way, they minimize false-negative results and guarantee sensitivity and specificity to the serological test used for PCM.

Keywords: exoantigen, immunodiffusion radial, Mato Grosso, *P. brasiliensis*, *P. lutzii*.

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