TITLE :COMPARATIVE ANALYSIS OF THE RESPONSE TO ZINC DEPRIVATION IN THE GENUS *Paracoccidioides*

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Fungi of the genus *Paracoccidioides* belong to a group of thermodymorphic organisms with a mycelial form 25-27 ° C and a yeast phase at 37 ° C. They are the etiological agents of paracoccidioidomycosis (PCM), a human systemic mycosis with wide distribution in Latin America. Micronutrients are necessary in extremely small quantities for the maintenance of organisms. Among those elements, metals can be highlighted. They act as components of transcription factors and cofactors of many enzymes. Zinc is one of those metals. It is the second most abundant transition metal in cells and the second most found in enzymes Pathogenic fungi are susceptible to zinc deprivation, and some of the mechanisms used by hosts include the sequestration of metals, such as iron and zinc. Due to the importance of micronutrients for fungus proliferation and pathogenicity, it is necessary to study the response of members of the genus *Paracoccidioides* to the deprivation of metals. We performed growth analysis of Pb01 (*P. lutzii*) and Pb18 (*P. brasiliensis*), at several concentrations of the zinc chelator Diethylenetriaminepentaacetic Acid (DTPA) in order to determine the optimal concentration to be used in the studies, that was of 100μM. RNAs were obtained from cultures at different time points in the presence of DTPA. Expression analysis of transcripts encoding the zinc transporters ZRT1 and ZRT2 at different time points of zinc deprivation was performed. The data established the best condition to study zinc deprivation in members of the *Paracoccidioides* complex. Proteomic analyses are under progress.

Keywords: *Paracoccidiodes*, zinc deprivation, quantitative real time PCR

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