

SUMMARY OF THESIS*

ASSIS, Cezar Mendes de – Estudo morfofisiológico de amostras de *Paracoccidioides*. São Paulo, 1997. (Tese de Doutorado – Instituto de Ciências Biomédicas da Universidade de São Paulo.)

We report here the morpho-physiological characterization of 20 isolates of *Paracoccidioides*, isolated from patients with paracoccidioidomycosis and other sources such as penguin (*Pygoscelis adeliae*) stools, viscera from an armadillo (*Dasipus novencinctus*), and from soil in different periods of time and from different regions from Latin America.

The results indicate the presence of some differences among the isolates, particularly with respect to the morphogenic and antigenic studies.

We analysed the growth in different culture media of the isolates at the temperature of 27° C. We also analysed the morphologic diversity by cultivating these isolates at constant and different temperatures.

We verified that the isolates of *P. cerebriformis* were temperature sensitive, when analysed their growth at temperature above 27° C. They presented neither morphology nor antigenic structure comparable to those reported to *P. brasiliensis*. We observed that the *P. tenuis* isolate consistently soften colonies, easily detachables from the culture medium, and whose micromorphologic structure were more tenuous than those of *P. brasiliensis* and *P. cerebriformis*. The isolates from *P. cerebriformis* displayed different pigments (white, ivory, yellow, pink, and gray), although their behaviour was not stable. In the other hand, pigments from *P. brasiliensis* and *P. tenuis* varied from white, ivory and brownish.

In this study we were not able to define a biochemical marker for the differentiation of the isolates. They all showed the same profile when proteinase, urease, phospholipase,

chondroitinase, hyaluronidase, behaviour in canavanine-glycine-bromothymol blue and tetrazolium chloride, were evaluated. Additionally, the same biotype was found for all isolates when the Odds & Abbott system was used. However, small differences were found among the isolates: variation in the PZ, color intensity of the colonies, and time for development of the biochemical reactions.

The antigens of the isolates of *P. brasiliensis* and *P. tenuis* reacted against a pool of sera from patients with paracoccidioidomycosis and a purified human IgG anti-Pb, as well as against anti-Pb and anti-gp 43 kDa from Pb hyperimmune sera; the same, however, was not observed with the antigens of isolates of *P. cerebriformis*. We also verified lack of reactivity of the antigens of all isolates against anti-*A. fumigatus*, anti-*H. capsulatum* and anti-*C. albicans* hyperimmune sera. We detected the glycoprotein of 43 kDa, the immunodominant antigen of paracoccidioidomycosis, in the antigenic fractions of *P. brasiliensis* and *P. tenuis*.

The study of the components of the external surface of the cell wall of *P. brasiliensis* 9 isolate, soluble in NaCl 0.85%, demonstrated that its antigenic structure was very complex. We verified that the more intense bands were those corresponding to the proteic bands of 43, 54, and 78 kDa, present in extracts obtained at 5th, 10th, 15th and 20th days of culture of the fungus at 36° C. They were considered, therefore, the major antigens of the fungus. We observed in the crude antigenic extract obtained at the 10th day of culture the higher number of proteic antigens, with the bands showing stronger intensity and higher protein concentration.

*This thesis is available at the Library of the Instituto de Medicina Tropical de São Paulo.