IS THERE MOLECULAR COMMUNICATION BETWEEN *CANDIDA ALBICANS* AND *PARACOCCIDIOIDES BRASILIENSIS*?

Derengowski, L.S.[1], Mello-de-Sousa, T.M.[1], Kyaw, C.M[1]., Silva-Pereira, I[1]

[1]Departamento de Biologia Celular, Instituto de Biologia, UnB, Brasília, Brazil

Recently, it has been described that, like bacteria, fungi also use extracellular autoinducing compounds to regulate population behaviors such as biofilm formation, morphogenesis and pathogenesis. In the dimorphic fungus *Candida albicans*, the hyphal formation is suppressed by supernatants obtained from high density cell cultures. The soluble factor that prevents mycelial development in this opportunistic pathogen is farnesol. Additionally, this quorum sensing molecule mediates the interaction between *C. albicans* and others organisms, like *Aspergillus nidulans*. In this study we examined the effects of supernatant from high-density *C. albicans* cultures (Conditioned Medium – CM) in the morphology of the dimorphic fungus *Paracoccidioides brasiliensis*. We observed a modulation of *P. brasiliensis* filamentation in response to different concentrations of *C. albicans* CM. The cultivation of *P. brasiliensis* in the presence of 50% of *C. albicans* CM prevents hyphal development, suggesting that *P. brasiliensis* germ tube formation was controlled by a soluble factor present in the CM. Confirming the data previously described in literature, our results revealed that the activity of *C. albicans* CM was not affected either by proteinase K treatment, or high temperature exposure. Furthermore, we verified that farnesol, when added to the culture medium seems to promote a similar effect on *P. brasiliensis* hyphal morphogenesis. Taken together, our results suggest molecular communication between *C. albicans* and *P. brasiliensis*.

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Key Words: *Candida albicans*, quorum-sensing, *Paracoccidioides brasiliensis*, farnesol.