TITLE: PROFILES OF IMMUNE RESPONSE IN DENDRITIC CELLS DERIVED FROM HUMAN MONOCYTES STIMULATED *IN VITRO* WITH YEAST OF *PARACOCCIDIOIDES* spp.

AUTHORS: SOUZA E.A.; FREIRE, H.P.S.; ROMANO, C.C.; REZENDE R.P.

INSTITUTION: UNIVERSIDADE ESTADUAL DE SANTA CRUZ – UESC (CAMPUS SOANE NAZARÉ DE ANDRADE - ROD. JORGE AMADO, KM 16 - SALOBRINHO, ILHÉUS - BA, 45662-900)

ABSTRACT:

Paracoccidioidomycosis (PCM) is one of the most frequent systemic mycoses in Brazil, its importance is due to the severe clinical manifestations that the individual can develop after contact with the *Paracoccidioides*. Such clinical manifestations, when presented by the host, are directly associated with varying degrees of depression of the cellular immune response.
Considering the importance and ability of dendritic cells to initiate the immune response by activation of *naive* T lymphocytes, determining the balance between the Th1 / Th2 response profiles, we investigated whether the interaction of yeasts of *P. brasiliensis* (Pb18) and *P. lutzii* (01) with dendritic cells derived from human monocytes (moDC), resulted in differences in the immune response of these cells when in interaction with the two fungal species. Monocytes obtained from peripheral blood from healthy subjects were differentiated *in vitro* for dendritic cells (moDC) and were stimulated with the yeasts of the two species of *Paracoccidioides* for 24h and 48h. Expression of surface molecules such as CD11c, CD86 and HLA-DR were analyzed by flow cytometry after incubation times, and the culture supernatants were collected for dosages of IL-10, IL-12, TNF-α and IFN-ɣ cytokines. Phagocytosis assays were performed, in which the moDC remained in culture with the yeasts of each isolate for 4h. The results suggest that the *P.lutzii* isolate inhibits the activation of moDCs by a mechanism that involves decreased expression of surface molecules, causing a suppressive pattern in the immune response of these cells, associated with reduced secretion of proinflammatory cytokines and a deficient phagocytic capacity when compared to *P. brasiliensis*-stimulated moDCs. Thus, it seems evident that the two species of the genus *Paracoccidioides* have distinct profiles of recognition and activation by moDC, and that the *P.lutzii* species has a greater ability to evade the immune response of these cells.

Keywords: Paracoccidioidomycosis (PCM), dendritic cells, immune response

Financial support: Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq) / UESC