

PROTEOMIC STUDY OF *Aspergillus fumigatus* DURING MORPHOLOGICAL TRANSITION BY 2D FLUORESCENCE DIFFERENCE GEL ANALYSIS TECHNOLOGY (2-D DIGE)

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Invasive aspergillosis, typically caused by *Aspergillus fumigatus*, is the most common filamentous fungal infection following hematopoietic stem cell transplantation. Other high risk groups include solid-organ transplant recipients, cystic fibrosis patients and patients receiving chronic corticosteroid therapy. We have recently described that *A. fumigatus* hyphae, but not the conidia, can induce a prothrombotic phenotype on endothelial cells (ECs). Also, we observed that the injury of ECs correlates with the morphological transition of *A. fumigatus*. In the present work we have studied, by the DIGE technology, the expression of proteins on *A. fumigatus* germlings and hyphae. The whole cells were treated with 2-mercaptoethanol (2-ME) after the morphological transition from conidia to hyphae. The germlings were obtained after 12 hours and the hyphae after 48 hours of growth in Sabouraud broth, respectively. The 2-ME extracts were further purified by precipitation with the 2-D clean up kit. Each extract was labeled with either Cy3 or Cy5 and fractionated by 2-D electrophoresis. The 2-D gels were analyzed by the DeCyder software and a total of 50 proteins were found to be differentially expressed during hyphae formation. Some are enzymes involved in cell wall remodeling that were identified by MALDI-TOF/TOF. Supported by CNPq and Faperj.