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CANDIDA ALBICANS ENHANCED PHOSPHOLIPASE PRODUCTION AFTER EXPOSITION TO A STATIC NON-UNIFORM MAGNETIC FIELD. A. Gasparetto[1*], T.E. Svidzinsky[2*], C.R. Paula[3*], R. Oliveira[4*], J. Azeredo[4*]. [1]Department of Dentistry Universidade Estadual de Maringá, Maringá, Paraná 87080-310 Brazil. [2]Department of Physics, Universidade Estadual de Maringá, Maringá Paraná, 87020-000 Brazil. [3]Department of Microbiology, Universidade de Sao Paulo, Sao Paulo 05508-730 Brazil. [4]Center of Biological Engineering, Universidade do Minho, Braga, 4710-057 Portugal.

INTRODUCTION: Microbial virulence factors are responsible for tissue damage in hosts. *Candida albicans* is an opportunistic pathogen that constitutes an increasing risk of infection, especially for immunosuppressed or immunocompromised patients.

OBJECTIVE: The objective of this study was to determine the effect of a static non-uniform magnetic field on the phenotype expression of different strains of *Candida albicans*.

METHODS: The strains of *Candida albicans* were grown on phospholipase-agar, according to Shimizu et al. (1996) and incubated at 37 ºC inside a magnetic field (except the assays used as blank). The magnetic field was generated by two magnetite plates (Figure 1) and standardized as a function of distance versus number of magnetic plates (Figure 2). The magnetic field was of 500 gauss in the central part between the two magnetic plates.

RESULTS: The preliminary results show a visible increase in the halo formed due to phospholipase production, suggesting that the exposition to a magnetic field can enhance the expression of this virulence factor.

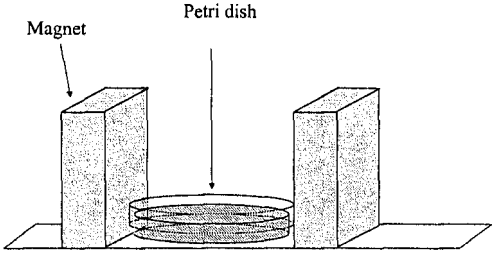

Figure 1- Schematic representation of the experimental set-up to generate the magnetic field.

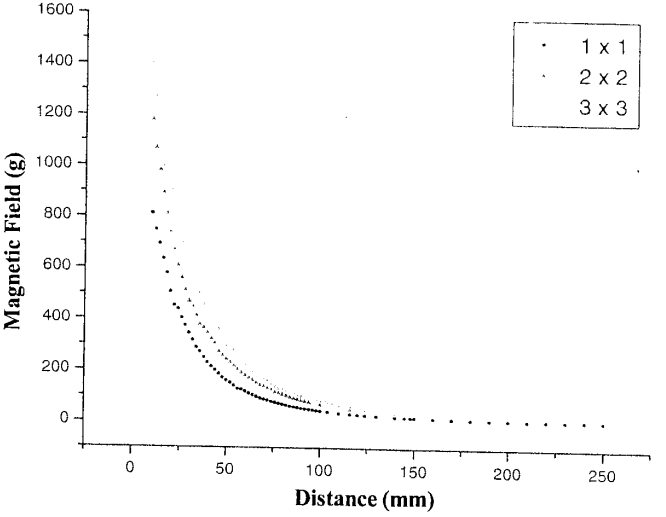

Figure 2 - Magnetic field (gauss) versus distance between magnetic plates (one, two or three in each side).

Reference.

Shimizu MT, Almeida NQ, Fantinato V, Unterkircher CS. Studies on hyaluronidase, chodroitin sulphatase, proteinase and phospholipase secreted by *Candida* species. *Mycoses* 1996; 39: 161-167.

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