

**TITLE:** EVALUATION OF THE VIRULENCE PROFILE OF FUNGAL ISOLATES FROM A REFERENCE HOSPITAL IN THE STATE OF MARANHÃO

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**ABSTRACT:**

Fungi have been the focus of studies by scientists and researchers because of their potential danger to human and animal health, and the vast majority are characterized as cosmopolitan and can be found in soil, humans, plants, decomposing materials and in domestic animals. Currently, many hospitalizations are recurrent in hospitals, due to the high incidence of systemic and opportunistic mycoses in Brazil. Thus, the objective of this work was to describe the virulence of isolated fungi (obtained from sputum, bronchial lavage, tracheal secretion, blood culture, serum, urine, cerebrospinal fluid and biopsy). The virulence factors of fungal isolates were evaluated by the determination of the enzymatic activities of phospholipase by measuring the size of the translucent halo by breaking phospholipids in lipophilipolipids by the formation of Pz (precipitation zone) and calculated as the ratio between the diameter of the colony and the diameter of the degradation zone of the phospholipase substrate, and catalase by the reduction of hydrogen peroxide in water and oxygen. The inocula were prepared with the fungal isolates (*Candida albicans*, *Candida tropicalis*, *Candida africana*, *Candida parapsilosis*, *Candida guillicimondii*, *Cryptococcus gattii*, *Cryptococcus laurentii*), (CEP nº2,927,864) suspended in saline solution (NaCl) to reach  $10^6$  cells / mL, followed by a 1: 1000 dilution to obtain the inoculum at a concentration of  $10^3$  cells / mL. phospholipase was observed in 86.6% of the isolates. Regarding the intensity of the production of the enzyme phospholipase, 20% of the isolates were classified as very strong producers of the enzyme and 13.3% as strong producers and 53.3% as moderate producers. The enzyme catalase was positive in all fungal isolates. Numerous research reports that certain virulence factors are essential for fungal microorganisms to enter host tissues. Thus, it is necessary to identify such factors of virulence in view that will facilitate the clinical evaluation of the patient, in addition to providing a better prognosis for it.

**Keywords:** Yeast Infections, Systemic, Opportunistic, Virulence, Fungi

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