

TITLE: EVALUATION OF *Candida parapsilosis* SENSU LATO CAPACITY TO FORM *in vitro* BIOFILMS.

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ABSTRACT:

Biofilms are microorganism communities that grow enclosed in an exopolysaccharides matrix, and stuck to an inert surface or a living tissue, in a wide variety of environments. 65% of human infections are related to biofilms formation. Biofilms act as a reservoir, they are a persistent source of infections, are difficult to eliminate and usually appear associated with relapsing infections. There exist evidence of *Candida parapsilosis* sensu lato capacity to form biofilms. The present work objective was to determine the biofilms formation capacity of *Candida parapsilosis* sensu lato strains involved in different human infections. After the incubation of 31 yeast strains from the *psilosis* complex in Sabouraud destroxse agar during 48 h at 37°C, 3×10^7 UFC/mL suspensions from each one of the strains were prepared in Sabouraud_destroxse broth, supplemented with glucose (8% glucose final concentration). 1 mL of each suspension was transferred to assay tubes containing 9 mL of Sabouraud destroxse broth; 200 µL of the resulting suspensions were placed in 96-well microtitre plates, incubating them at 37°C during 24 h with agitation. The plates were subjected to four washing cycles with phosphate buffer, and were dyed with 1% safranina solution. Then, the optical density level was measured at 492 nm, using a microplate reader. The biofilm formation was classified according to its capacity to form biofilms as weak (+), moderate (++) and strong (+++). From all the strains tested, 55% formed biofilms *in vitro*, while the remaining 45% did not exhibit biofilm formation. The strains that formed biofilms showed different capacity: 16% of them were classified as strong, 26% were classified as moderate and 13% as weak. The majority of the strains of *Candida parapsilosis* sensu lato tested showed certain capacity to form biofilms. This result is of great importance in the way to understand the biofilms role in the pathogenesis of mycosis.

KEYWORDS: Biofilms; *Candida parapsilosis* sensu lato

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