

TITLE: PRODUCTION OF EXTRACELLULAR ENZYMES THE PATHOGENIC YEASTS ISOLATED IN ORAL CAVITY

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ABSTRACT

The oral cavity is full of microorganisms, usually commensal; however, many are opportunistic, so in some situations, they become pathogenic, originating the famous fungal infections. Yeasts of the genus *Candida* are the ones that most cause infections, called candidoses. The fact that *Candida* spp. to cause so many infections may be associated with its capacity to produce extracellular enzymes, and thus, the present work aimed to identify enzymatic activities in four yeast species of the genus *Candida*, were *C. albicans*, *C. glabrata*, *C. tropicalis* and *C. parapsilosis*, isolated from the oral cavity. For this, the strains cultured in specific media, aiming to evaluate the presence of protease, coagulase, catalase and chitinase. Each test lasted seven days, with daily readings. For the final reading, the culture submitted to specific revealing solutions, aiming to reveal the halo. As a quality microbiology of control utilized standard strain (ATCC) of *Cryptococcus neoformans* and *Candida albicans*. Yeasts that had a whitish halo around the colony considered positive, those that did not have a halo, considered as negative. For the protease tests, two substrates (egg and albumin milk) were used, obtaining respective results of 50% and 42% considered as positive. As for coagulase, 57% of the colonies were positive. The catalase test obtained the highest positive percentage of all, reaching 92%. The colonies tested for chitinase production reached 50% positivity, and the LMACg6 sample obtained higher proteolytic activity in this test. When comparing the enzymology characteristic of the four species in all the media used, observed that the isolates LMA Cg2, Ca1 and Ct1 were positive in all the tests, and obtained the largest halos and colonies, indicating high enzymatic production and infectious potential. The control lineage used was only positive for coagulase. The results show that all tested strains present enzymatic production, corroborating to a greater pathogenicity of these pathogenic yeasts, potentiating opportunistic infections and chronic toxoinfections.

Palavras-chave: candidoses, enzymes, opportunistic infections.

Apoio: Grupo de Pesquisa do CNPq Microbiologia Aplicada; CNPq e FAPITEC/SE e Universidade Federal de Sergipe.