TITLE: HYDROLYTIC ENZYMATIC COMPOUNDS PRODUCED BY *Meyerozyma caribbica*

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ABSTRACT:
Biotechnologically, the industrial application of microorganisms has been increasing significantly. In the bioremediation process, for example, hydrolytic enzymes produce by microorganisms, can be applied for the reduction or even eradication of undesirable residues and/or difficult degradation. Bacteria, yeasts filamentous fungi and basidiomycetes stand out as the most studies in the production of hydrolytic enzymes. Traditionally, the detection of such enzymes can be done using specific medium, rich in esters, proteins, starches, and other, which induce the production of hydrolytic enzymes specific to each compound. The aim of this study was to determine the enzymatic expression of *Meyerozyma caribbica* in the production of esterase, protease, and amylase. The thirteen strains were ceded by the Soil Fungus Collection (L089, L090, L091, L099, L100, L102, L107, L113, L114, L188, L189, L199, and L206) were grown in yeast extract, peptone, dextrose and agar – YEPD agar medium. After three days of cultivation, at 28 ±2°C and 12 hours photoperiod, the colonies were transferred and deposited punctually with a sterile wooden toothpick on the specific medium for the determination of amylase, protease, and esterase. For the control treatment, in the plates containing specific medium, sterile wooden toothpick was inserted and removed quickly on the surface of the medium. The experiment was performed in triplicate, with five replicates in each treatment and the experimental design was completely randomized. The plates were incubated for nine days at 28±2ºC in the dark and the enzymatic expression was determined qualitatively by the presence of translucent or opaque halo around the yeast colonies. As to produce enzymes, the diameter of the enzymatic halos of the positive isolates and the percentage of the área of enzymatic diffusion in the medium were measured. All the isolates of *M. caribbica* were positive for esterase, with the CFS L199 isolate having diffusion percentages of approximately 11.11%, relative to the surface area of the plaque. The proteolytic expression was evidenced in the colonies of CFS L107 and CFS L102. Only the L188 isolate was positive for amylolytic expression. The detection of enzymatic expression and selection of isolates are preliminary studies, capable of directing subsequent research related to the metabolism of these hydrolytic enzymes and possible biotechnological applications of *M. caribbica*.

Keywords: Biotecnology; Enzymatic Expression; Yeast.

Development Agency: Coordenação de Aperfeiçoamento de Pessoal de Nível Superior - CAPES