TITLE: SUSCEPTIBILITY OF *Klebsiella pneumoniae* CARBAPENEMASE (KPC) - PRODUCING ON Wickerhamomyces anomalus MYCOCINS

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ABSTRACT:

Yeast producing mycocins are capable of promoting lethal activity on sensitive microorganisms. The increase of bacteria producing carbapenemases has become a worldwide concern, since infections caused by these microorganisms have limited antibiotic treatment, taking a high rate of morbidity and mortality. The objective of this study was test the action of myocins, produced by environmental strain of *Wickerhamomyces anomalus* WA40, against *Klebsiella pneumoniae* producing carbapenemase (KPC). The mycocins were obtained by culture supernatant of *W. anomalus* WA40 using the modified Sabouraud broth (1 % peptone, 2 % glucose, 1.92 % citric acid and 3.48 % dibasic potassium phosphate) pH 4.7; 25 °C for 5 days, after the incubation period, the broth was centrifuged at 6000 r/min for 10 minutes. The supernatant containing mycocins was homogenized in Mueller Hinton agar and poured into petri dishes, then KPC was inoculated by continuous streaks. The positive control was performed in the same way, but without mycocins, finally incubated at 37 °C for 24 hours. Mycocins of *W. anomalus* WA40 were able to inhibit KPC bacteria. Results evidenced the antibiotic activity of the mycocins produced by *Wickerhamomyces anomalus* against *Klebsiella pneumoniae* producing carbapenemase.

Keywords: mycocins, *Klebsiella pneumoniae* carbapenemase, multi-drug resistance

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