

# Isolation and Characterization of New *Metschnikowia pulcherrima* Strains as Producers of the Antimicrobial Pigment Pulcherrimin

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*Metschnikowia pulcherrima* is a highly effective biocontrol yeast due to its pigment pulcherrimin that accumulates in the cells and in the growth medium. Three different strains of *M. pulcherrima* were isolated from local grapes. The yeast isolates were characterized on the basis of their biochemical, physiological and ITS1-5.8 s rDNA-ITS2 region. Based on the obtained results, the *M. pulcherrima* isolates were identified as new strains of *M. pulcherrima*. Strong antagonistic activities of the *M. pulcherrima* strains on the human pathogens *Proteus vulgaris*, *Escherichia coli*, *Candida albicans*, *Candida parapsilosis*, *Candida krusei*, and *Trichosporon mucoides* were determined. In addition, antagonistic effects of these *M. pulcherrima* strains were also tested against *Aspergillus flavus*, *Aspergillus fumigatus*, *Aspergillus niger*, *Trichoderma* spp., *Paecilomyces* spp., and *Bipolaris* spp. and it was shown that the three different strains of *M. pulcherrima* also have an antagonistic effect on the growth of these fungal species at different extents. This study showed that all three strains of *M. pulcherrima* produce the same amount of the pigment pulcherrimin, but their antimicrobial activities on different microorganisms show important variations.

**Key words:** Biocontrol, Pulcherrimin, Antagonistic Yeasts