

PATHOGENICITY, HEAVY METAL AND OXIDATIVE STRESS SENSITIVITY OF *CANDIDA ALBICANS* MORPHOLOGICAL MUTANTS AND THEIR HYBRIDE

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The wild-type strain of *Candida albicans* (ATCC 10261) was used to obtain stable auxotrophic colony morphological mutants by repeated induced mutagenesis. Mutant M5 produced wavy colonies containing only true hyphae while mutant M2 exhibited undulated colonies containing 90% blastospores and 10% pseudohyphae. The intraspecific somatic hybride of these two mutants induced by Ca²⁺-PEG produced two types of prototrophic stable clones. The colonies of clone VI.9S were smooth and contained only blastospores which proved the full complementation and recessive character of genes responsible for morphogenesis. Clone VI.1M exhibited regular-wrinkled colonies containing a new, unipolar budding, extended cell type that has never been observed in natural isolates. This phenotype suggested the partial complementation and semi-dominant character of mutated genes.

The increased DNA content of hybride clones was detected by flow cytometry measurement. Eight ctosomes of mutants were visualized by karyotyping while hybride clones VI.9S and VI.1M had ten and twelve bands of different type, respectively. It might suggest their aneuploidity. Increased ploidity did not result in an elevated level of tolerance to heavy metals (CrO₂-7, Cu²⁺) and oxidative stressors (Cd²⁺, menadione), but the sensitivity of mutant M5 to these agents was inherited and expressed in hybride clone VI.1M. All other behaviour types of clone VI.1M namely sensitivity to nystatine, amphotericin B, miconazole; adhesion ability to inert surface; pathogenicity to mice; isoenzyme patterns, and RAPD-PCR patterns, showed genetic similarity to M5 parental mutant, while hybride clone VI.9S reminded us of M2 parental one.