

THE STUDY OF THE MORPHOLOGY AND GROWTH OF FUNGI OF THE SPECIES CANDIDA TROPICALIS

Sugrobov M.O., Chornolyk M.D., Shapovalova O.V., Strelnikov L.S.

The National University of Pharmacy, Kharkiv, Ukraine

sugrobov.maks@gmail.com

Candida tropicalis is a unicellular yeast-like fungus, oval or round shape with a size of 6-10 microns, is a new major causative agent of human infections.

Candidiasis - diseases of the mucous membranes, skin, and internal organs. Candidamikids - secondary allergic rashes, indicating a significant degree of sensitization to the pathogen and the products of its life. *C. tropicalis* is considered the third most isolated from cultures. The composition of the cell wall of the fungus provides good protection from the effects of adverse environmental factors, including medicines. Fungi *C. tropicalis* are ubiquitous and the common members of the human microbiota. However, they are also important opportunistic microorganisms for people with weakened immune systems. The fungi of this genus can be found in almost everywhere: from soil, vegetables and fruits to household items and its own body, where the fungi are part of the normal microflora, they are even found on the mucous membranes of the oral cavity in 14-50 % of healthy individuals.

Opportunities *C. tropicalis*: a strain of yeast of the genus *C. tropicalis* demonstrates that it has the potential for use in bioremediation (purification of polluted water from high-strength oil-containing compounds). Also *C. tropicalis* can be used to produce biodiesel from olive wood. For the cultivation of the fungus of the species *Candida tropicalis* were used liquid and dense nutrient medium: Sabouraud agar, Sabouraud broth, some of them was enriched with 10% serum of cattle. On a dense nutrient medium to obtain growth of isolated colonies the culture was inoculated method debilitating sowing. The inoculations were incubated at 37 °C. The growth of the culture was carried out every 24 hours.

The morphology of the fungus was studied in preparations for microscopy - "crushed by the drop" and the smears stained with methylene blue solution. During these studies it was assessed, the growth in liquid nutrient media and colony morphology on solid media (their structure, texture, shape, color, size and shape), as well as the morphology of the cells in stained preparations.

The results of the experiment it can be concluded that this type of fungus *Candida tropicalis* well-cultivated on nutrient dense environments. Form a bi-zonal colony of white or gray in color, with smooth edges, with smooth or slightly wrinkled surface. The first two days creamy, then medullar form, smoothed edges ragged. In liquid media there was only observed benthic growth, usually visible surface film, high parietal ring.