

Yeast

Yeast are a biologically paraphyletic group of eukaryotic organisms.

Importance of yeasts in medicine

They are important for medicine for several reasons. Some yeasts can cause diseases, such as vulvovaginal candidiasis. Yeast of the genus *Candida* can be pathogenic, mostly causing opportunistic infections. Opportunistic infections in immunocompromised patients are in practice caused only by the yeast of the genus *Cryptococcus*. Yeast extracts can be used as a dietary supplement or medicine, especially in the supplementation of certain B vitamins. Yeast extracts are often produced using *Saccharomyces cerevisiae*: the yeast used for baking (baker's yeast).

Some yeasts can be used as an inexpensive model organism in molecular biology research. In particular, the yeast *Saccharomyces cerevisiae* is one of the basic model organisms in molecular biology. Some yeasts can be used as an active ingredient in a bioreactor in the synthesis of some proteins.

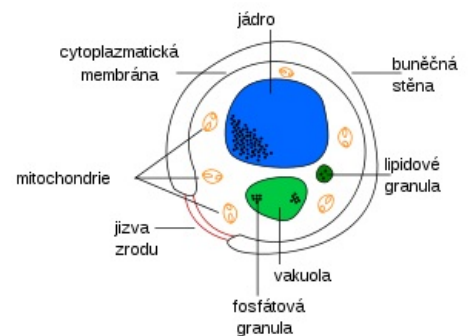


Diagram of a yeast cell.

Candidiasis (*candidosis*)

Candidiasis is an infection caused by a yeast of the genus *Candida*. There are more than 20 types of *Candida* that can cause infections in humans. The most common pathogen is *Candida albicans*. Yeast is a common component of the intestinal, mucosal, and cutaneous flora. If they overgrow, problems can develop. Candidiasis of the mouth and throat is called thrush (powdery mildew, oropharyngeal candidiasis). Vaginal candidiasis or yeast vulvovaginitis (vulvovaginal candidiasis). When the yeast enters the bloodstream, invasive candidiasis develops. ^[1]

Overview of pathogenic yeasts

Genus *Candida*

- *C. albicans*,
- *C. tropicalis*,
- *C. stellatoidea*,
- *C. glabrata*,
- *C. krusei*,
- *C. parapsilosis*,
- *C. guilliermondii*,
- *C. viswanathii*,
- *C. lusitaniae*,
- *C. auris*.

Genus *Rhodotorula*

- *R. mucilaginosa*.

Genus *Cryptococcus*

- *C. neoformans*,
- *C. gattii*.

Links

Reference

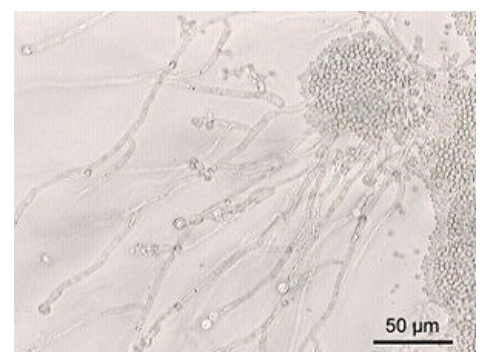
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1. Centers for Disease Control and Prevention. *Candidiasis* [online]. CDC, © 2015. [feeling. 2019-04-15]. < <https://www.cdc.gov/fungal/diseases/candidiasis/index.html> >.



Candida albicans on Sabouraud agar.



Candida albicans as seen with a 200x microscope magnification.

