

## Yeast and yeast like fungi

### Candida

- \* Yeasts: are single celled fungi, adapted to liquids candidiasis or thrush is a fungal infection (Mycosis) of any of candida species [all yeasts], of which *Candida albicans* is the most common. Thrush is commonly seen in infants [children]. Candida growth limited by human immune system. There are 13 types of candida.
- \* Yeasts are reproduction asexually by binary fission or by budding [small buds of aparent cell]. Some species exhibit cell fusion between different meeting types.
- \* There are two types of fungi; 1- yeasts and 2- molds
- \* Yeasts grow as single cells that produce by asexual budding.
- \* Molds grow as long filaments (Hyphae) and form a mat (Mycelium). Some hyphae form transverse walls (septate hyphae), whereas others do not (non septate hyphae), non septate Hypha are multinucleated (coenocytic).
- \* An important exception is *Candida albicans* which is part of the normal human flora.
- \* Some fungi reproduce sexually by mating and formation sexual spores e.g. 1- Zygosporos 2- Ascospores and 3- Basidiosporos
- \* Zygosporos are single large spores with thick walls; Ascospores are formed in a sac called ascus; and basidiosporos are formed externally on the tip of a pedestal called a basidium. The classification of these fungi is based on their sexual spores.

Fungi that do not form sexual spores are termed " imperfect " and are classified as fungi imperfection.

- \* Most fungi propagate a sexually by forming " conidia " (a sexual spores) from the sides or ends of specialized structures.

The shape, color, and arrangement of conidia aid in the identification of fungi. Some important conidia are:

- 1- Arthrospores: which arise by fragmentation of the ends of hypha and are the mode of transmission of *Coccidioides immitis*.
- 2- Chlamydo spores: which are rounded, thick – walled, and quite resistance (the terminal chlamydo spores of *C. albicans* aid in its identification).
- 3- Blastospores: which are formed by the budding process by which yeasts produce a sexually [some yeasts; e.g. *C. albicans*, can form multiple buds that do not detach, thus producing sausage – like chain called pseudohyphae.
- 4- Sporangiospores, which are [sporangia] formed with in a sac [sporangium] on a stalk by mold such as *Rhizopus* and *Mucor*.

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*The End*