

Fungi: The fungi are a group of eukaryotic microorganisms, sporebearing, heterotrophic organism that produce extracellular enzymes and absorb their nutrients Some of which are capable of causing superficial, cutaneous, subcutaneous, or systemic disease.

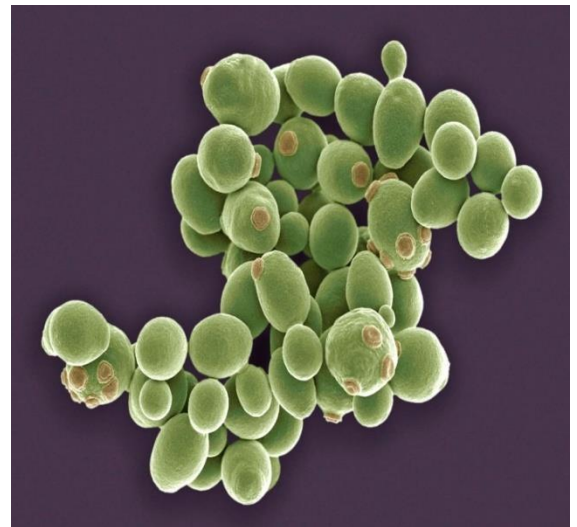


Characteristics of the Kingdom Fungi :

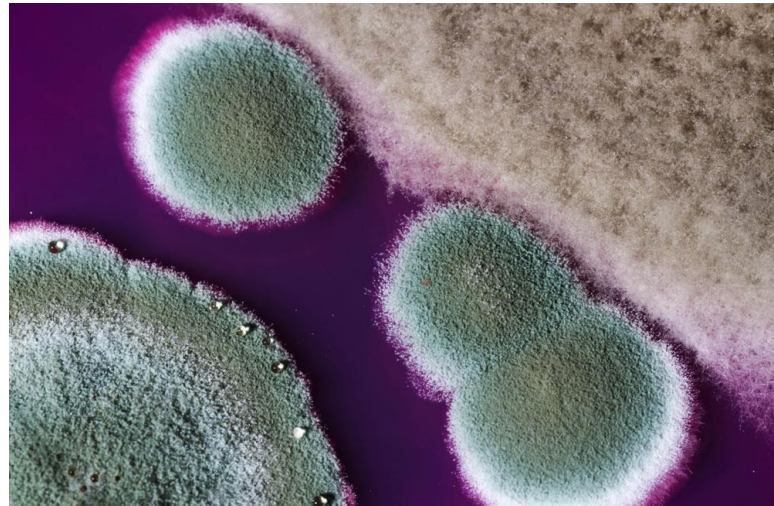
1. Reproduction: both asexual and sexual .
2. Mode of nutrition: fungi are all heterotrophic and digest their food externally by releasing hydrolytic enzymes into their immediate surroundings
3. Growth rate of fungi is slower than that of bacteria.
4. Most of the fungi are Obligate aerobes (molds) and few are facultative anaerobes (yeasts)
5. Optimum temperature of growth for parasitic fungi is (25 -37) C.
6. Fungi grow best in acidic environment

Essential form of fungi:

1. Yeast: unicellular fungi reproduce by budding.



2. Molds: multicellular long filaments fungi known as hyphae, which grow by apical extension. Hyphae can be septate or nonseptate and possess a variable number of nuclei. The hyphae group together to form a conglomerate called the mycelium.



3. Dimorphic: grow as molds (environment) or yeasts (in human host) ex: *Candida albicans*

Specimen collection for fungal testing

Specimens for fungal microscopy and culture are transported to the laboratory in a sterile container. They include:

- Scrapings of scale, best taken from the leading edge of the rash after the skin has been cleaned with alcohol
- Skin stripped off with adhesive tape, which is then stuck on a glass slide
- Hair which has been pulled out from the roots
- Brushings from an area of scaling in the scalp
- Nail clippings or skin scraped from under a nail
- A skin biopsy
- A moist swab from a mucosal surface (inside the mouth or vagina) in a special transport medium.

A swab should also be taken from pustules in case of secondary bacterial infection.