

The Kingdom of Fungi

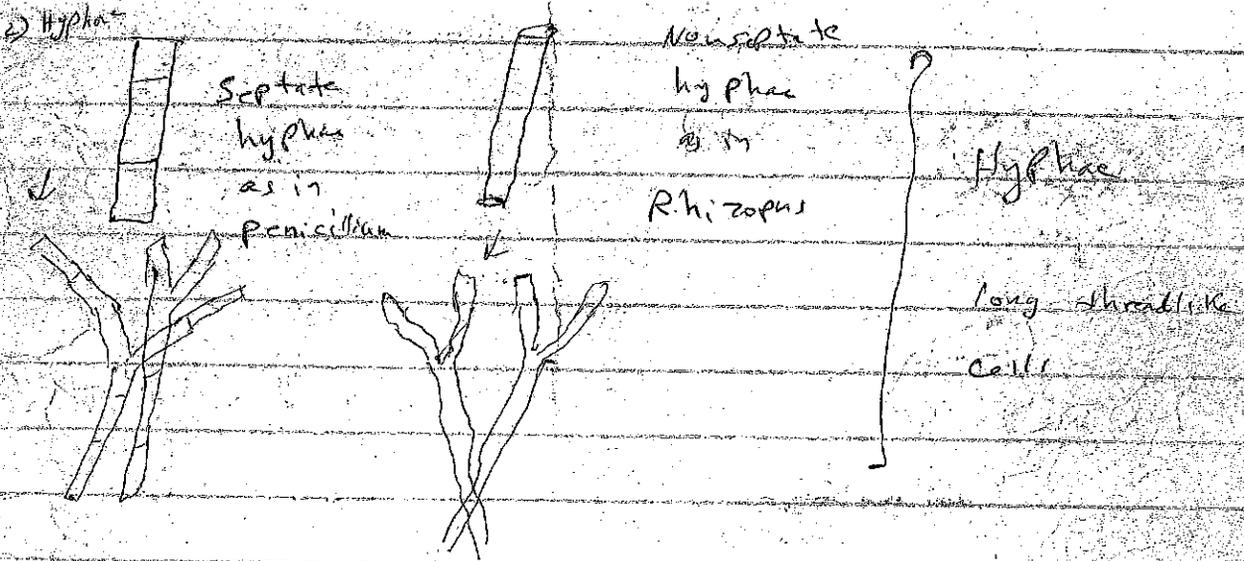
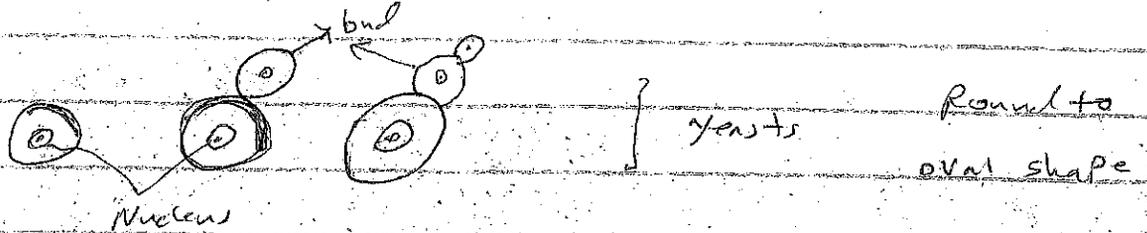
Fungi = ~ 100,000 species of fungi, divided into two groups

a) Macroscopic Fungi: e.g. mushrooms

b) Microscopic: e.g. yeast

Microscopic fungi exist in two morphological types

1) yeast 2) hyphae



All fungi are heterotrophic, acquire nutrients from organic materials called substrates

Medical and agriculture impact:

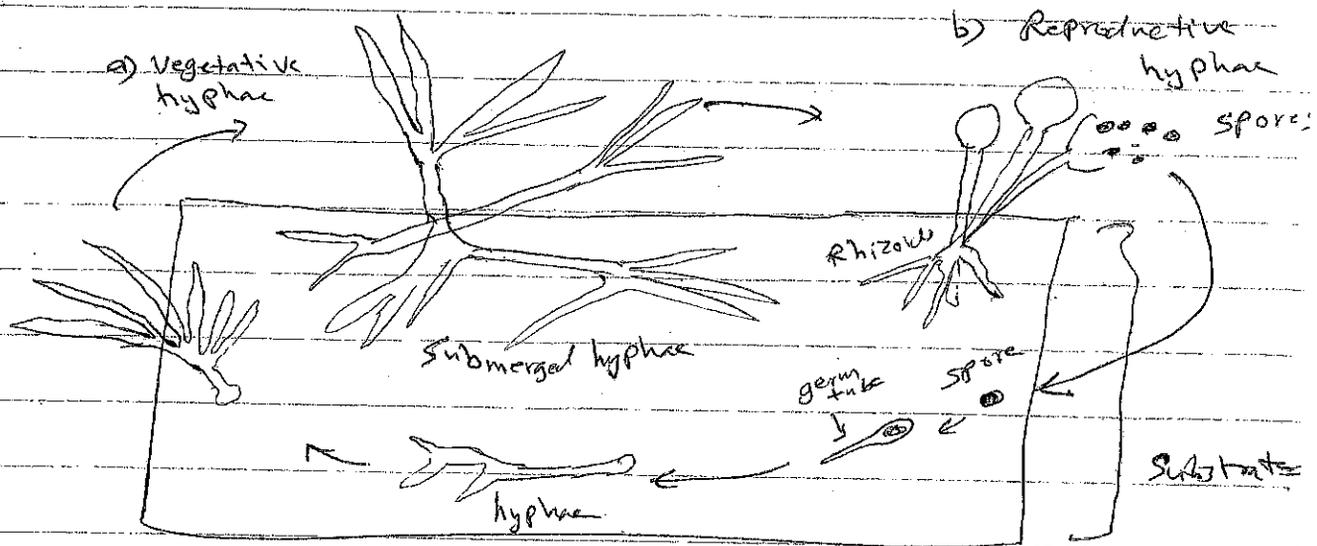
- a) cause infection in human skin
- b) Plant pathogens
- c) Toxins → human disease (allergies)

Reproductive Strategies

b) Reproductive hyphae

Hyphae can be classified: a) vegetative hyphae = mycelia; are responsible for the visible mass growth that appears on the surface of a substrate and penetrates it to digest and absorb nutrients.

During the development of fungal colony \rightarrow vegetative hyphae \rightarrow give rise \rightarrow reproductive or fertile hyphae \rightarrow produce spores



c) Germination

Do not confuse fungal spores with the more resistant nonreproductive bacterial spores.

Fungal spores are responsible:

- a) Multiplication
- b) Survival
- c) producing genetic variation
- d) dissemination - light weight - dispersed widely through the environment by air, water, and living things.

Spores arise by:

A) Asexual spores: products of mitotic division of a single parent cell.

B) Sexual spores: formed through a process involving the fusing of two parent nuclei followed by meiosis.

Zygospores:

Spores formed when hyphae of two opposite strains (called the plus and minus strains) \rightarrow fuse \rightarrow create a diploid zygote \rightarrow swell \rightarrow hyphae