



AKA
Fungi

Fungus

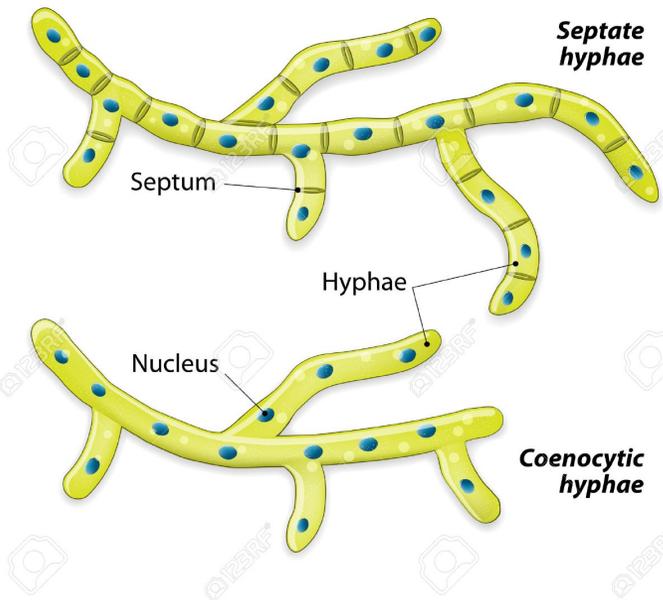




- A **fungus** (plural: **fungi** or **funguses**) is any member of the group of eukaryotic organisms that includes microorganisms such as **yeasts** and **molds**, as well as the more familiar **mushrooms**.
- Fungi are more closely related to **animals** than **plants**.
- Fungi are **heterotrophic**: they use complex **organic** compounds as sources of energy and **carbon**, not photosynthesis. (they break down things and eat the carbon)

- The rigid layers of **fungal cell walls** contain complex polysaccharides (What are those?) called **chitin** and glucans. Unlike plants cell walls that are made of **Cellulose**
- Chitin, also found in the exoskeleton of **insects**, gives structural strength to the cell **walls** of fungi.
- The wall protects the **cell** from desiccation (loss of **Water**) and predators.
- The vast majority of fungi are **multicellular**.
- However Fungi can be **unicellular**, multicellular, or **dimorphic**, which is when the fungi is unicellular or multicellular depending on **environmental** conditions.

FUNGI



To re “cap”

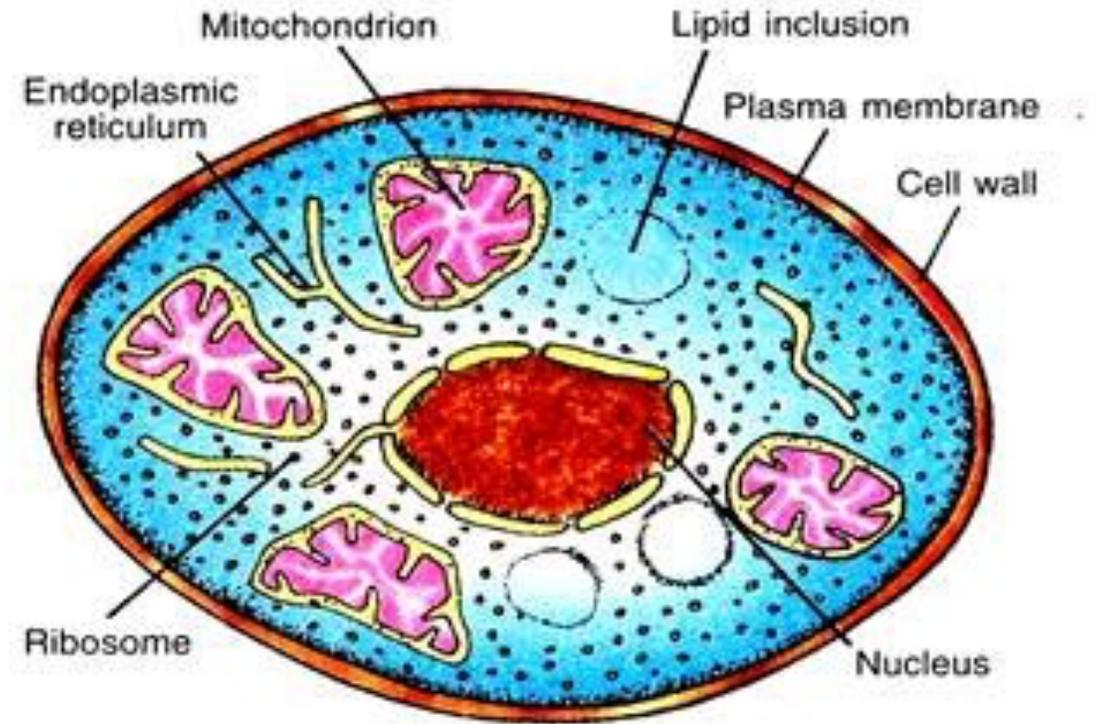


Fig. 1.8. *Fungi.* Fine structure of *Torula* Yeast cell based on an electron micrograph.

- Most of the body of a fungi is made from a network of long, thin filaments called '**hyphae**'. Hyphae are the main mode of vegetative growth, and are collectively called a **mycelium**.
- Hyphae filaments are made from tubular cells that connect end on end. Each cell is surrounded by a **cell wall** composed of a compound called **CHITIN**.

Life cycle of fungi

- Fungi multiply either asexually, sexually, or both.
- The majority of fungi produce spores, which are defined as haploid (n) cells that can undergo mitosis to form multicellular, **Haploid (n)** individuals.

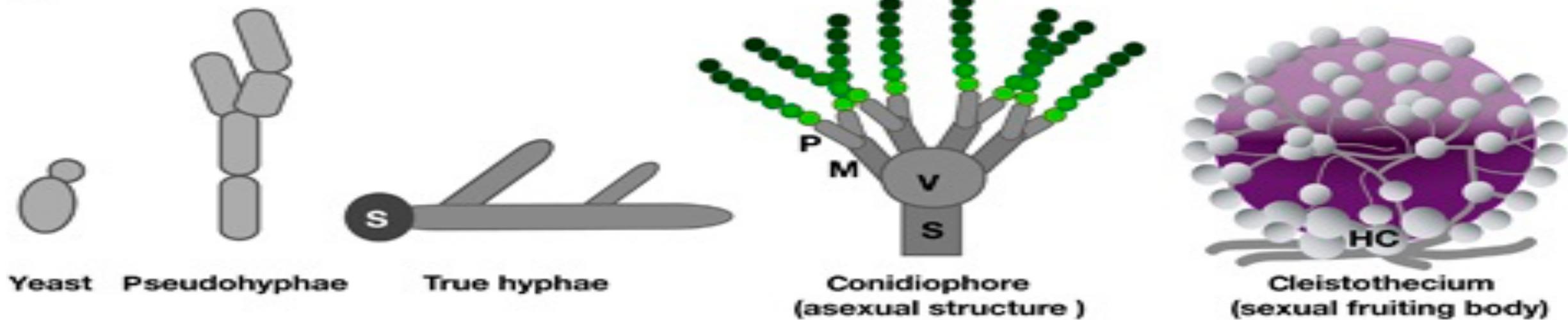




- New colonies of fungi can grow from the **fragmentation** of hyphae known as **budding**.
- During **budding**, a bulge forms on the side of the cell; the bud ultimately detaches after the **nucleus divides mitotically** (as a duplicate just like a cell).
- **Asexual spores** are genetically identical to the parent and may be released either **outside** or **within** a special reproductive sac called a **sporangium**.
- **Adverse environmental** conditions are what often causes **sexual** reproduction in fungi, possibly for survival.



(a)



(b)

