

Phylum : Basidiomycota

General characteristics :

- 1- Is one of two large Phylum that, together with the Ascomycota .
- 2- filamentous fungi composed of hyphae (except for basidiomycota-yeast) .
- 3- reproduce sexually By the formation of specialized club-shaped end cells called **basidia** that normally bear external spores (usually four).
- 4- Specialized spores in this phylum called **basidiospores** .
- 5- The basidiospores on the basidium is naked in nature or inside a vegetable composition called **basidiocarp**.
- 6- The Threaded fungal(hyphae) in Basidiomycotaforming a **Clamp connection** between adjacent cells, which are characteristic of this Phylum .
- 7- the Basidiomycota include these groups: mushrooms, puffballs, stinkhorns, bracket fungi, other polypores, jelly fungi, boletes, chanterelles, earth stars, smuts, bunts, rusts, mirror yeasts, and the human pathogenic yeast Cryptococcus.

Basidiospores :

Is the unit of sexual reproduction in Basidiomycotawhich is formed after passing through the stages of sexual reproduction Plasmogamy and Karyogamy and then the Meiosis, the last two stages occur in the basidium and eventually consists of four **basidiospores**on each basidium .**figure (1)**

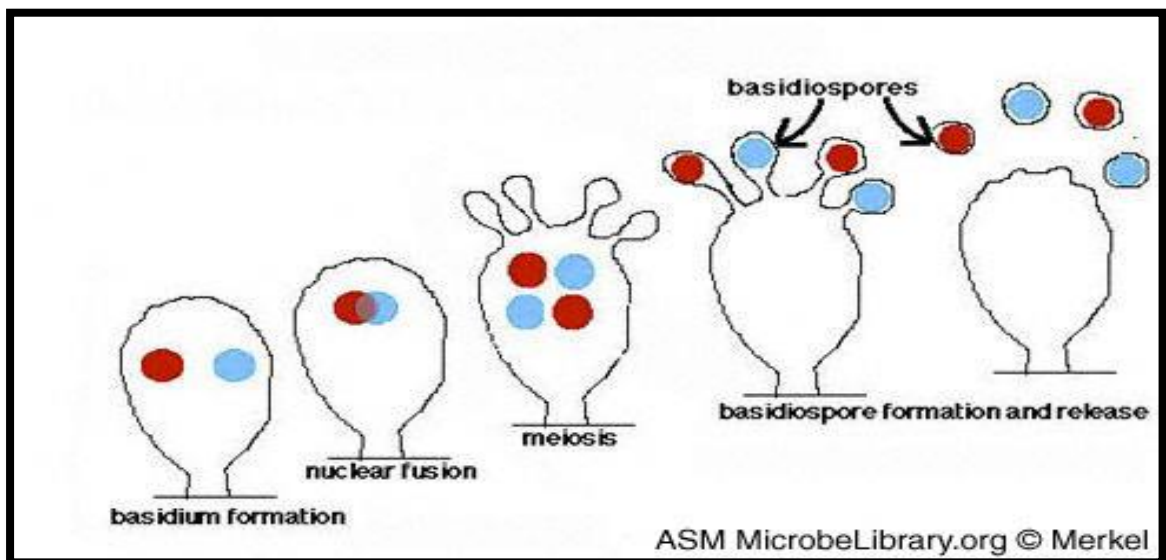


figure (1) Phases of formation the basidiospores

Asexual reproduction:

Asexual reproduction of Basidiomycota fungi by budding or Fragmentation the mycelium or by the formation of conidides or by Urediospores.

Presence :

Basidiomycota are found on land and in different parts of the world. Most of them live on a variety of organic materials, which have the ability to decompose organic matter and rot wood.

Economic importance:

- 1- Live parasitic on plants caused by plant diseases such as rust rust diseases and smut diseases .
- 2- some species are used as food for humans around the world, such as fungus Mushroom .
- 3- some species are toxic and deadly to humans called Toadstool, such as *Amanita sp.* Which is called the Death Angel.

Basidiocarp :

sexual vegetable structures contain sexual spores consisting of False fungus tissue and vary depending on the fungi such as:

- ❖ Jelly fungi
- ❖ Birds nest
- ❖ Bracket fungi
- ❖ Toadstool
- ❖ Mushroom

Basidiocarp is different in size from a small microscope that is not seen by the naked eye to several feet in diameter and several kilograms in weight. For example, the size of Polypores is 147 cm in diameter, and the mushroom weight sometimes reaches 5 pounds. Basidiocarp is also different in composition, whether it is skinning, gelatin, wood, sponge or paper .

A perfect Basidiocarp of mushroom consisting of the following structures :

- a- Cap or Pileus
- b- Gills
- c- Ring or Annulus
- d- Stapeor Stem
- e- Volva

figure (2)

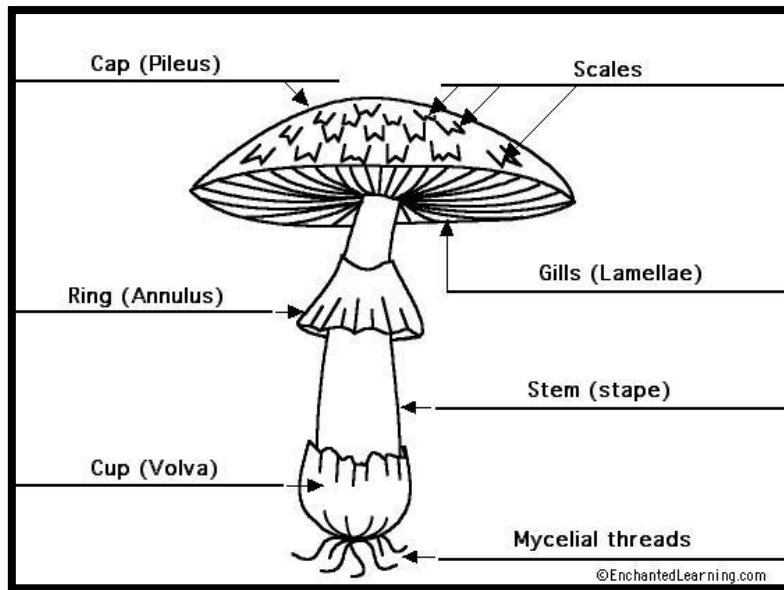


figure (2)Basidiocarp Structures

Basidium :

A reproductive structure in Basidiomycota fungi carried four Sterigmata (perfect number) each Sterigmata carry one Basidiospores .

Types of Basidium :

- 1- **Holobasidium** : consists of one cell different sizes undivided
- 2- **Phragmobasidium** : divided by septa Longitudinal or transverse
- 3- **Teiliobasidium** : Represent Teliospore **figure (3)**

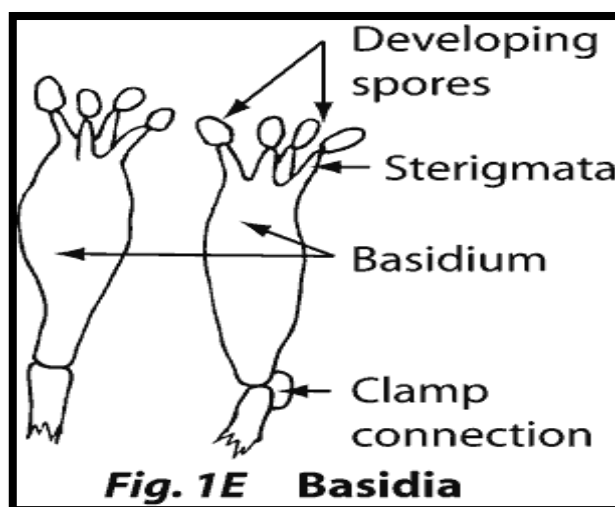


figure (3)

