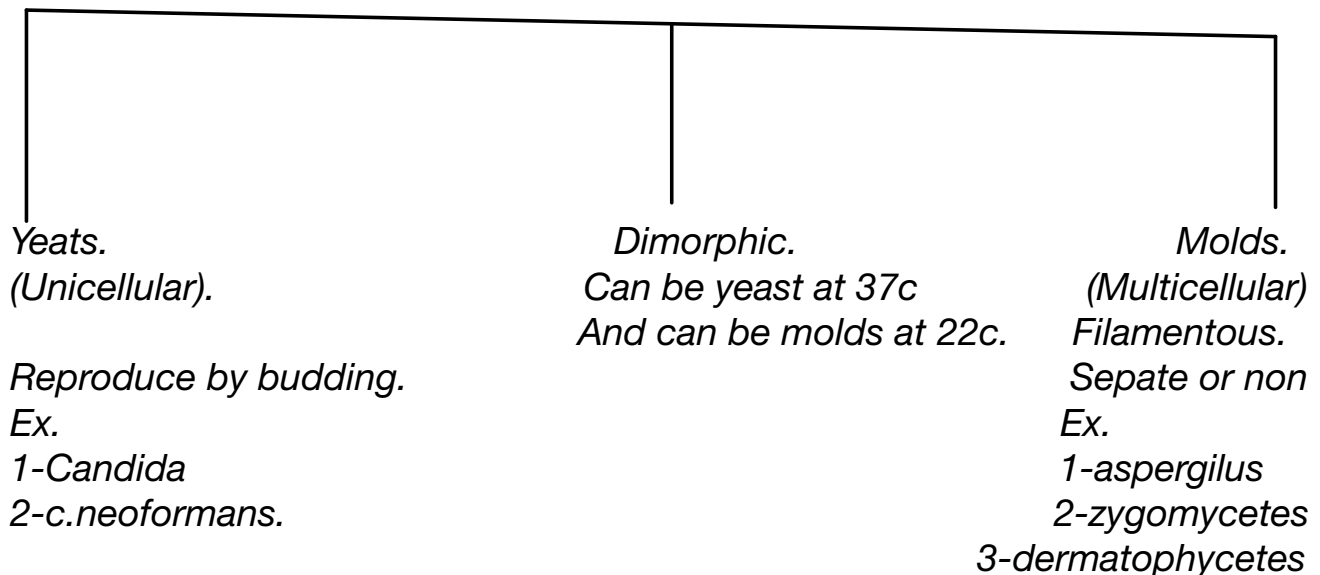


## Fungi

- It's obligate intracellular
- Eukaryotic and Lack chlorophyll
- Heterotroph; either saprophytic or parasaprophytic
- Mostly are harmless and reproducing by budding or spores
- It's Cell wall consist of chitin, B-gluten and mannan
- Cell membrane consist of ergosterol

Classified into



- fungal toxins?  
Ex. Aflatoxin B  
It's mutation in *tp53* >>> cause HCC.

- Treatment of fungal infections?
  - 1 • polyene derivative: 1-amphotericin B (target cell wall), 2-Nystatin (target ergosterol).
  - 2 • Azole (Ergosterol target).
  - 3 • allylamines .Ex(Terbifine). (Ergosterol target)
  - 4 • 5FC. (Cell wall target)

**The end**

•Fungal infections.

1- superficial

Caused by **malassia**

Ex. **Tenia versicolor**

Hyperpigmentation, hypopigmentation

Not itchy, asymptomatic

Under microscope we see spaghetti and meatballs

Ex. **Sebhrotic dermatitis**

Under microscope we see gryase scales

Lesions are red

2-cutaneous

Ex. **Tenia Ring worm**

Caused by **dermatophytes**

Transmission by either zoonophilic or Geophilic or PTP

Shapes

**A.tenia pedis(foot)**

**B.Tenia capitis(most severe)(head)**

**C.Tenia corporis (all of body)**

**C.Tenia ubngumm (nails)**

3-subcutaneous

Ex. Rose thorn disease

Ex. Mycetoma can be either by **1.actinomyces**

**2. Modeurella**

Affect farmers.

In CJI and lower limbs and hands

•Opportunistic fungal ?

•Candida

•c.neoformans

•Aspergillus

•zygomycetes

•pneumocetes

**The end**

- Protozoal infections

Can be in intestine Such as **E.histolytica,B.coli,G.lamblia,cryptosporidium**

Or can be in UG such as **Trochomonas**

Or can be in Tissue such as **Taxoplasm**

Or can be in blood such as **Plasmodium, leishmania,tyroponsom**

- intestine

A. **E.histolytica.**

- In large intestine

- Cause bloody diarrhea (amebiasis)

- Complications:hemorrhage and ulcers

- They are commensalism of this family

1-E.hartim

2.E.dispar

B. **G.lamblia.**

- In small intestine

- Cause fatty diarrhea

- Complications:Fever,malabsorption,and diarrhea.

C. **Cryptosporidium.**

- Cause diarrhea in intractable Persons

- Cause meningitis

- Cause lung disease

- Cause mild gastroenteritis

D. **B.coli.**

- Cause bloody diarrhea

E. **Cyclosporine.**

- Cause diarrhea in immunocompromised

- UGT

Trochomonas cause Trochomonas(valvovaginitis)

Asymptomatic in female(vaginal discharge)

Symptomatic in male

**•Blood**

**A. Trypanosoma. 2 Types very important**

**1- t.Bruce**

**Which cause African sleeping sickness**

**Vector: tsetse fly**

**2-t.cruzi**

**Which caused American Chagas' disease**

**Vector : kissing bug**

**B. Leishmania**

**Obligate intracellular**

**Infect the macrophages cells v**

**Vector:Female sand fly**

**3 subtypes :**

**•cutaneous face : L.major and L.tropica**

**•Mycocutaneous : L.braziliensis**

**•Visceral : L.dornani**

**C. Plasmodium**

**•Cause malaria**

**•Types : •P.falciparum ( main one cause malaria and it cause malignant tertian )**

**•P.malaria**

**•P.vivax (the most widespread world wide)**

**•P.ovale (with vivax it cause benign tertian)**

**•P.knowlesi**

**Tissue •Ex. Toxoplasma**

**•Cause gondii**

**•Vector: cats**

**•يصيب الامرأة الحامل فمممكن يسببها اجهاض**

**The end**

Helminths infections 1

•Nematoda

A. Ascaris>>> **It's transpulmonary and soil transmitter**

B. Enterobius

C. trichuriasis>>>> **It's Soil transmitter**

D. Ankylostoma>>>> **It's penetrating the skin and it's Transpulmonary**

E. strongyloides

**It's an ex in internal auto infections**

**It's transpulmonary**

F. Trichonella spiralis

It's put larva not egg

**It the only Intracellular**

•Tissue Nematoda

Ex . Filariae: • **It's put larva not egg**

• **Need intermediate host**

Types : • **weiccheria and burgi cause elephantiasis by mosquitoes**

• **luo luo and anchora cause eye-worm disease**

•schistoma: 2 types

In GI veins

S.monasi (lateral spine).

S. Japani (curved spine)

In bladder veins

S.hematbium

(Terminal spine)

•Cestoda

A. **Tania either sagina (beef) or solium (pork)**

B. **Echinococcus which cause hydated cyst**

C. **Diphyllobothrium which is the longest One**

**The end**