



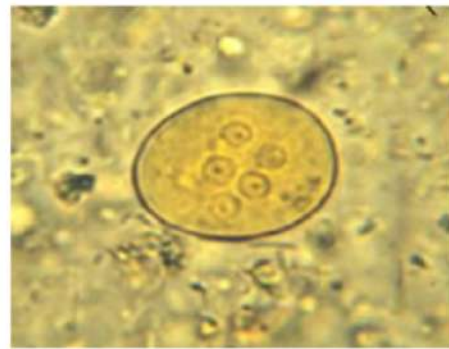
هذا اللاب عليه 3 أو 4 أسئلة 1 mycology + 3 parasitology
 or
 1 mycology + 2 parasitology
 *سؤال هروري على Parasitology
 *سؤال على Adult worm
 *سؤال هروري على mycology
 Agar ← Head or

Protozoa



Four nucleated cyst of
Giardia lamblia

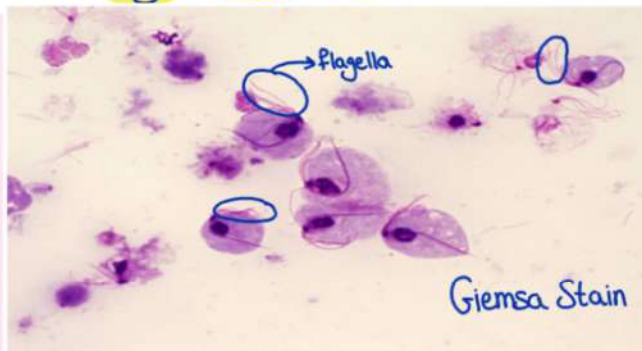
Infective stage + Diagnostic stage
 uplonged (oval) in shape
 شكلها مثل الوجه الج بطلع علينا من
 microscope



Four nucleated cyst of
Entamoeba histolytica

Infective stage + Diagnostic stage
 Circular in shape

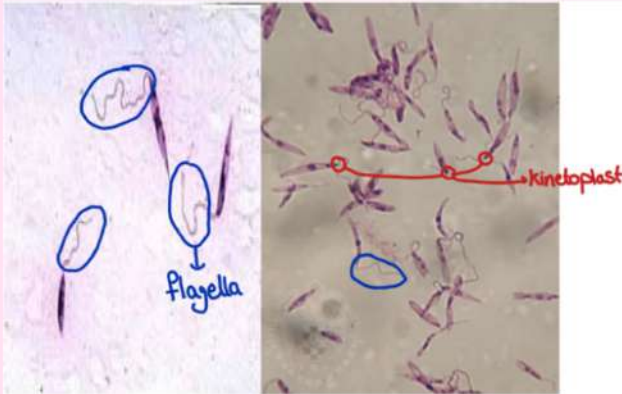
Infective stage → cause the disease (from ingestion)
 Diagnostic stage → in stool



Trophozoites of Trichomonas vaginalis → No cyst
 → flagella

Infective stage + Diagnostic stage
 ↓
 in vaginal secretion & urethral secretion
 in male & female
 which is transmitted sexually

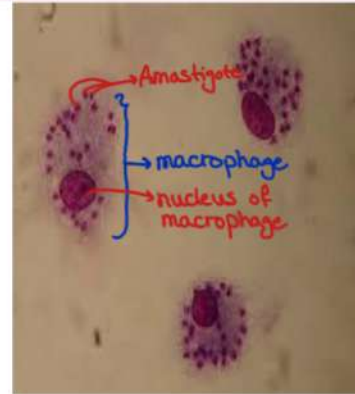




Promastigote of Leishmania donovani

Infective stage

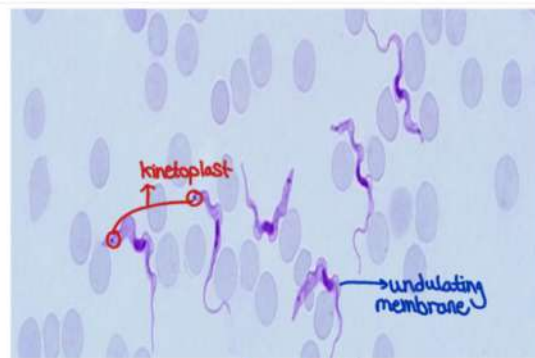
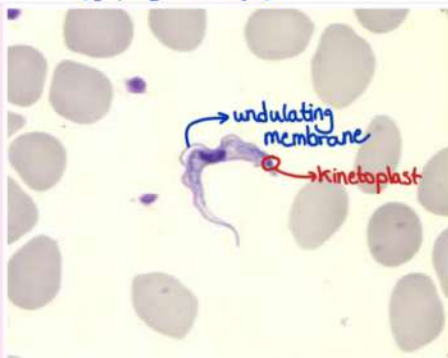
- Spindle in shape
- has a single flagella
- No undulating membrane
- most anterior kinetoplast (مركز الحبيبة في البداية)



Amastigote of Leishmania donovani

Diagnostic stage (in blood)

- Non-flagellated
- exist intracellularly (inside the macrophage)



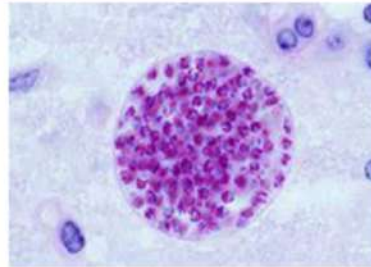
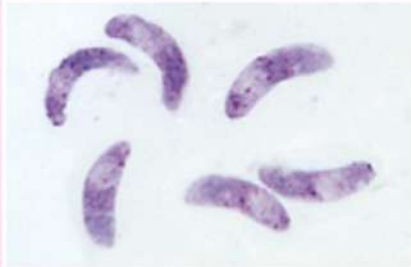
Trypomastigote of Trypanosoma

brucei
cruzi

Infective stage + Diagnostic stage

- kinetoplast in posterior





Tachyzoite
- Crescent Shape هلالية الشكل

Bradyzoite (tissue cyst)

Infective stages of Toxoplasma gondii

Helminths

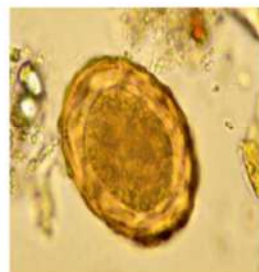
General morphology of Nematodes

- Adult is an elongated, cylindrical and unsegmented with tapering ends.
- They have lumen (cross-section of the worm shows a cavity within which lie the different organs).
- All have toothed mouth.
- Have separate sex, male is smaller than female & its posterior end is curved ventrally.

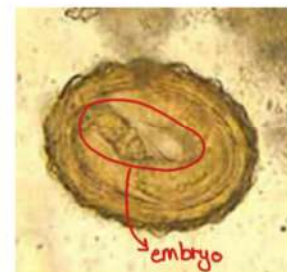
Ascaris lumbricoides



Adult worm
Cylindrical & whitish in color



Fertilized Immature egg
(Diagnostic stage) → in stool
- no embryo inside it

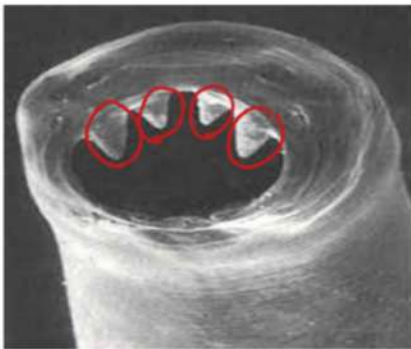


Embryonated egg
(Infective stage)





Ancylostoma duodenale **(Human hookworm)**



Adult worm

(with well developed teeth)



Immature egg with 4 blastomeres

(Diagnostic stage)

Infective Stage → Filariform L3 (Larvae)

Enterobius vermicularis



Adult worm



Embryonated egg "D-shaped"

(Infective + Diagnostic stage)





General morphology of Trematodes

A) Adult worm:

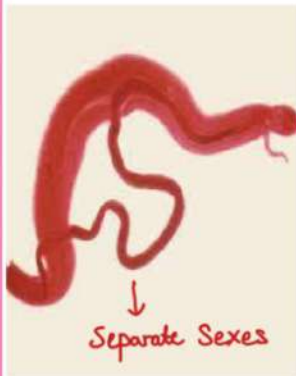
مثل الورقة

- **Flat (NO body cavity), leaf-shaped unsegmented.**
- **Organ of fixation:** They all live in lumens and so they possess **suckers.**
- All are **hermaphroditic** (The adult worm contains male and female genital organs) **except schistosomes have separate sexes.**

B) The eggs are usually **oval** and **operculated** except for schistosomes, which are **spined.**

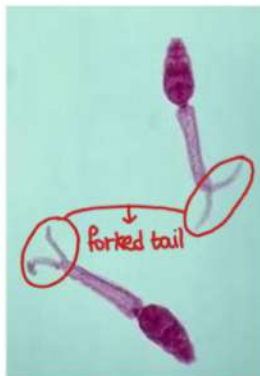
لها عتاش

Schistosoma



Separate Sexes

Adult male & female



Forked tail

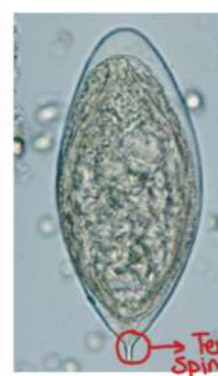
Forked tailed cercaria (Infective stage)

↓
through penetration



Lateral Spine

Egg (Diagnostic stage) → in urine with lateral spine
S. Mansoni



Terminal Spine

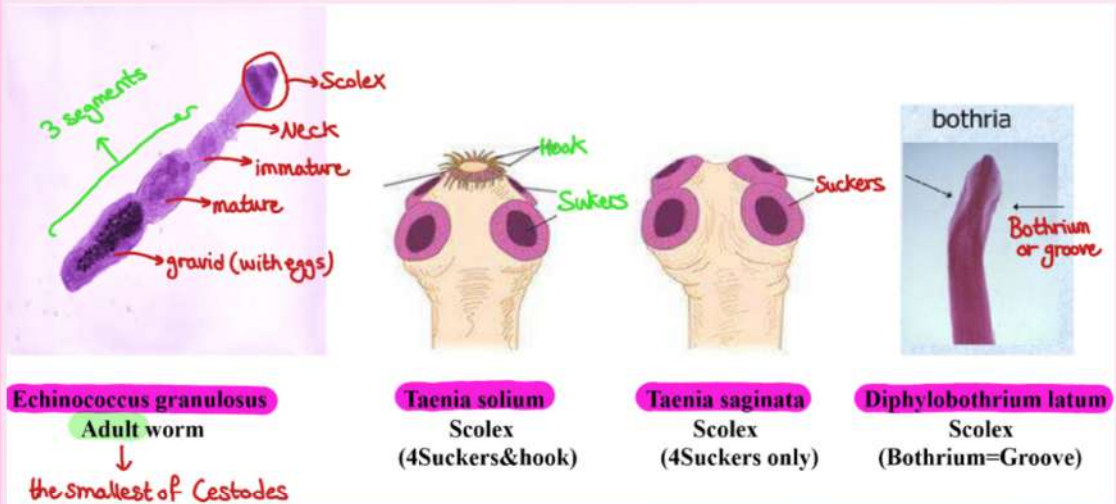
→ in urine with terminal spine
S. haematobium





General characteristic of Cestodes

- Adult are usually **flat** (No body cavity), ^{من الشريط} **tape-like**, **segmented**.
- The length of some cestodes may reach 10 meters.
- They possess **scolex**, **neck**, and **proglottids**.
- The **scolex** may be equipped with **suckers**, **hooks**, or **grooves**.
- The **neck is the actively dividing part** with regenerative capacity.
- The **proglottids near the neck, are young immature segments**, behind them are the **mature segments**, and at the **hind end, are the gravid segments**.
- All tapeworms are **hermaphrodites** (mature segment contains both male and female genital organs).





Mycology



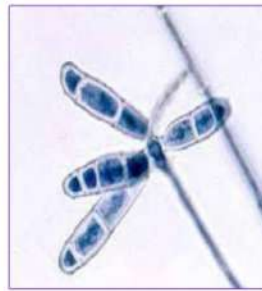
Dermatophytes (Ringworm)



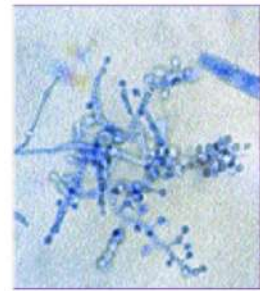
KOH preparation
All species show
Septate hyphae and
arthrospores



lactophenol cotton blue
Microsporum
Spindle shaped

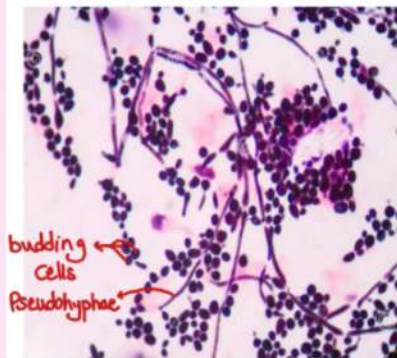


lactophenol cotton blue
Epidermophyton
Club shaped



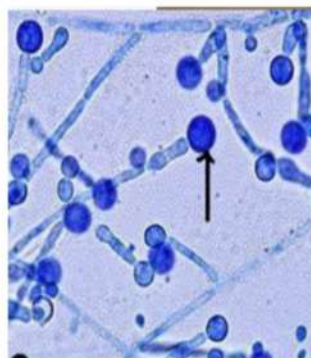
lactophenol cotton blue
Trichophyton
Rounded or oval

Candida albicans



budding cells
Pseudohyphae

Gram stain
Budding cells
with pseudohyphae



صافى مظهر (تجاهل)

Germ tube test
Tubal outgrowth
C. albicans +ve
at 37°C



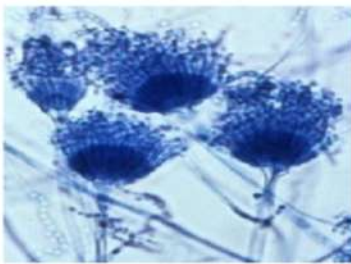
Sabouraud's agar
Cream colored, pasty colonies
with distinctive yeast smell



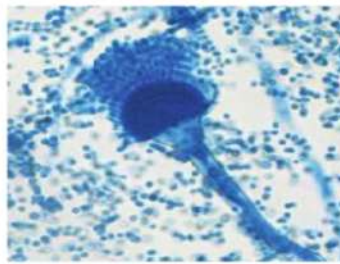


Aspergillus spp.

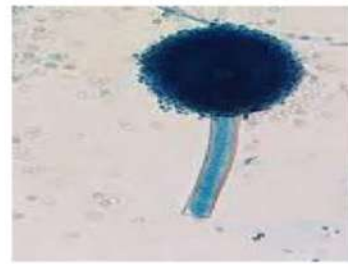
Lactophenol cotton blue preparations shows **filamentous septate hyphae** with characteristic **aspergillus head**.



A. Fumigatus
Flask shaped head



A. Flavus
Hemi-spherical head



A. Niger
Rounded head

On Sabouraud's agar



A. Fumigatus
Smoky green spores



A. Flavus
Yellowish green spores



A. Niger
Black spores





هذا التفريغ صدقة عن روح

"هبة خالد الوريكات"

وبقية شهداء العلم في حادثة التكنو

اللهم ارحمهم واغفر لهم وتقبلهم من الشهداء

الصالحين

نسألكم الدعاء لهم والفاتحة

