

# GIT Micro Lab 3

2021-2022

Dr. Mohammad Odaibat  
Department of Microbiology and Pathology  
Faculty of Medicine, Mu'tah University

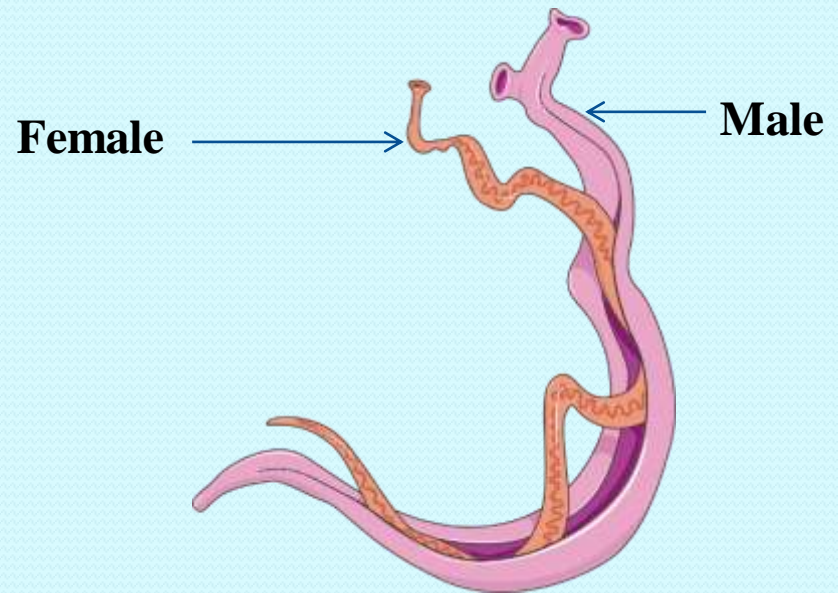
# Schistosoma

Cylindrical worm (Not flat – leaf like).

Only trematode in which sex is separated while other trematodes are hermaphrodite (Monoecious)



**Trematoda (flukes)**



**Schistosoma**

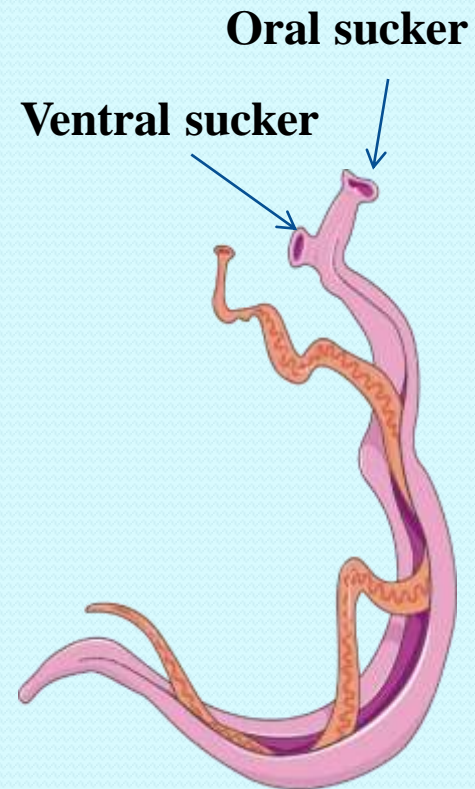
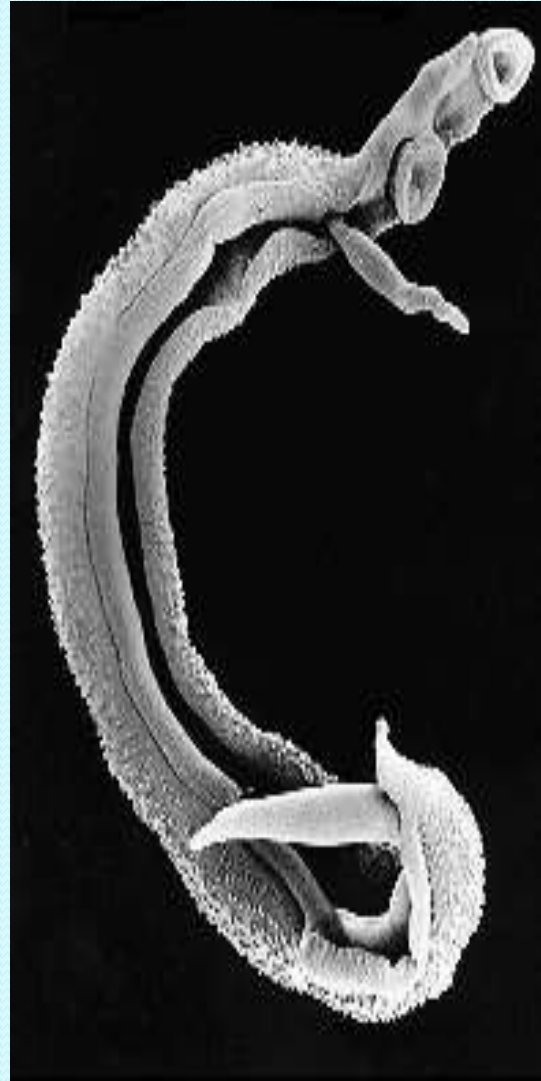
# *Schistosoma mansoni* male

❖ **Size** : 8 x 1 mm.

❖ **Oral & Ventral suckers.**

❖ **Testes**: 6 - 9, small and lie in cluster.

❖ **Gynecophoric canal** in which female held during copulation

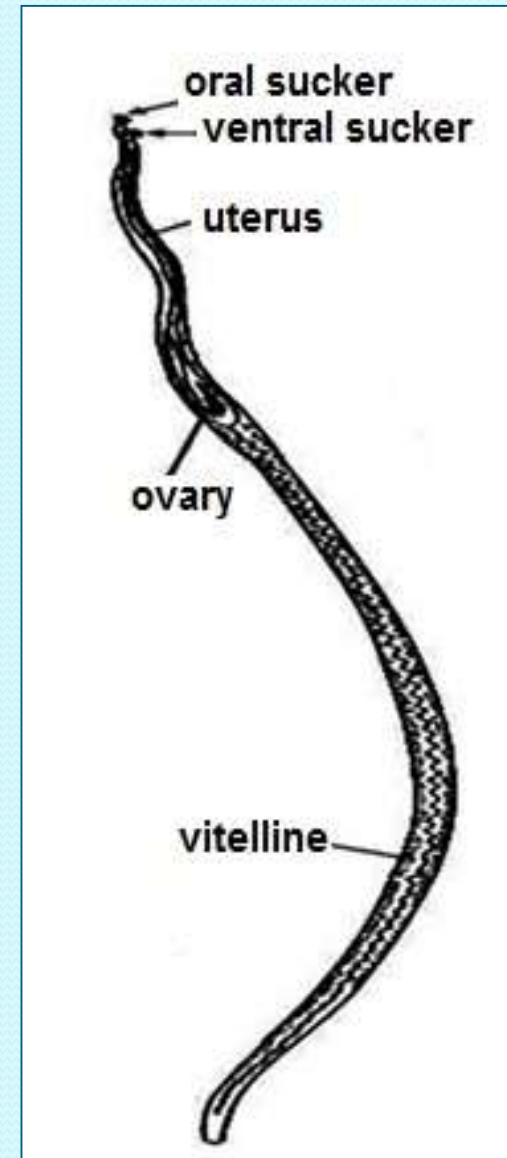


# *Schistosoma mansoni* female

❖ **Size:** 14x 0.15 mm

❖ **Ovary:** Anterior 1/3 of the body

❖ **Uterus:** Short with 1-4 ova.



# Egg of *S. mansoni*

- ❖ **Shape:** Oval with lateral spine
- ❖ **Colour:** Translucent
- ❖ **Content:** Mature (fully developed miracidium).

## Egg of *S. japonicum*:

- ❖ eggs are more round with a small spine on the side.



## *S. mansoni*



## Miracidium



## Ciliated larva

## **Cercaria of *S. mansoni* (I.S)**

❖ **Body** : Oral and ventral suckers, primitive gut and 5 pairs of penetration glands.

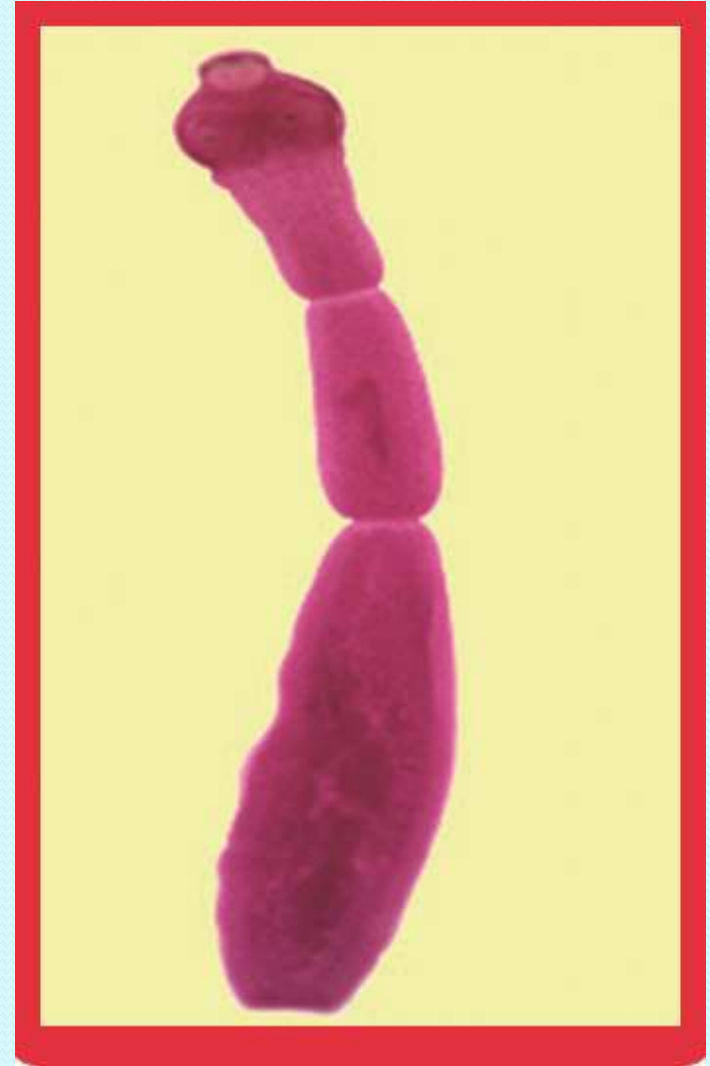
❖ **Tail** : Forked  
(**Furcocercuscercaria**).



# *Echinococcus granulosus* adult

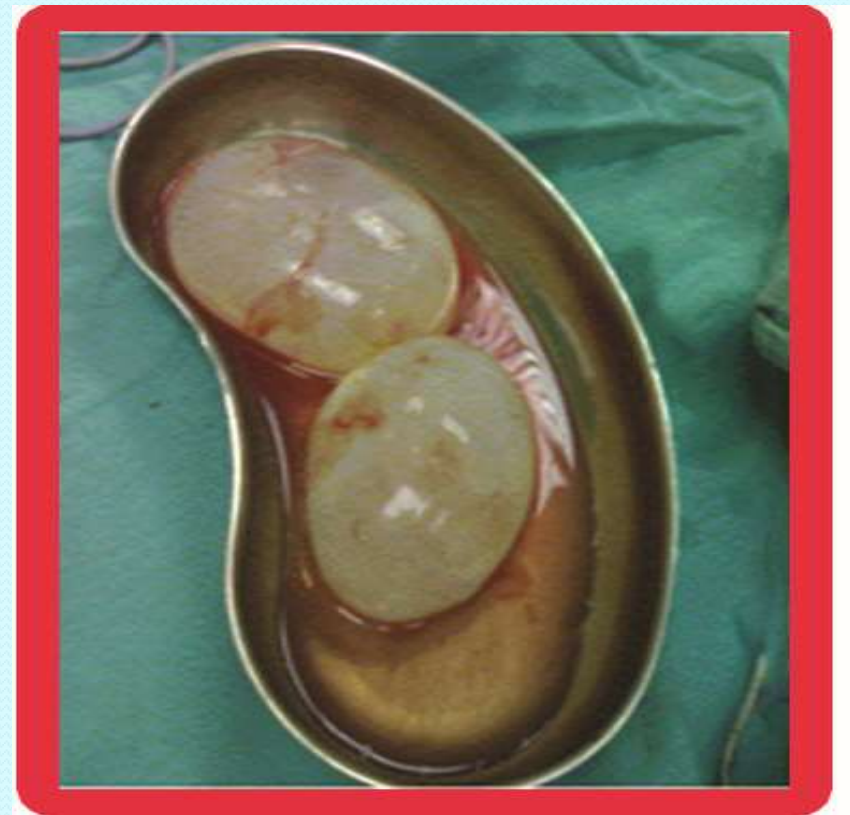
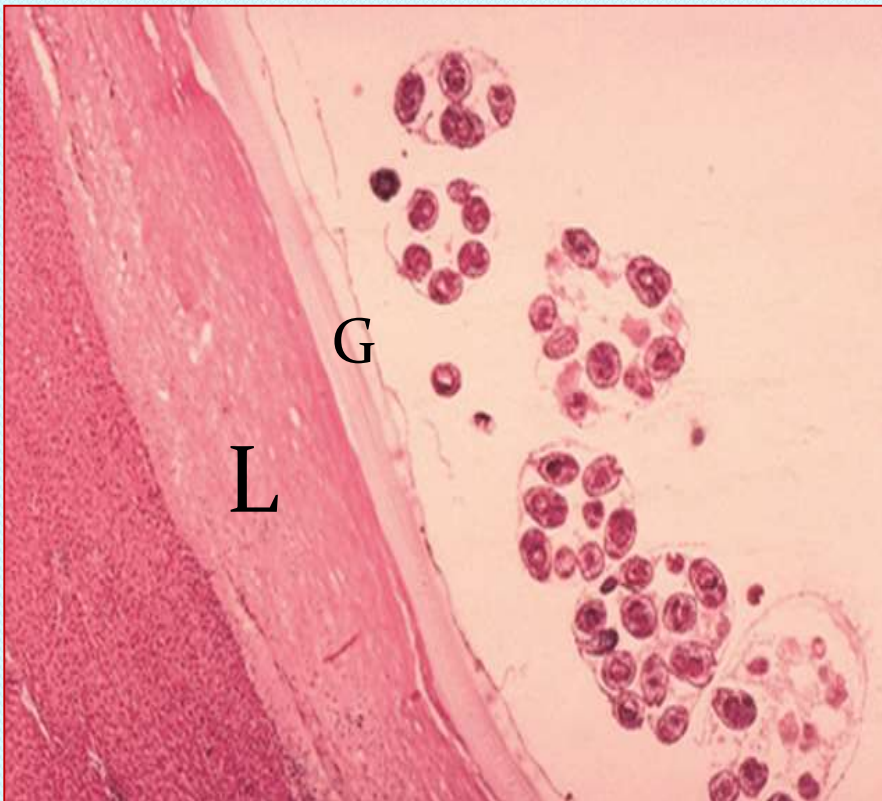
## 1) Adult:-

- **Scolex:**
  - Globular in shape.
  - 4 muscular suckers.
- **Strobila : 3 segments : immature, mature & gravid.**



**Hydatid cyst**  
**(D.S in man and herbivorous)**

**Simple unilocular**  
**hydatid cyst**

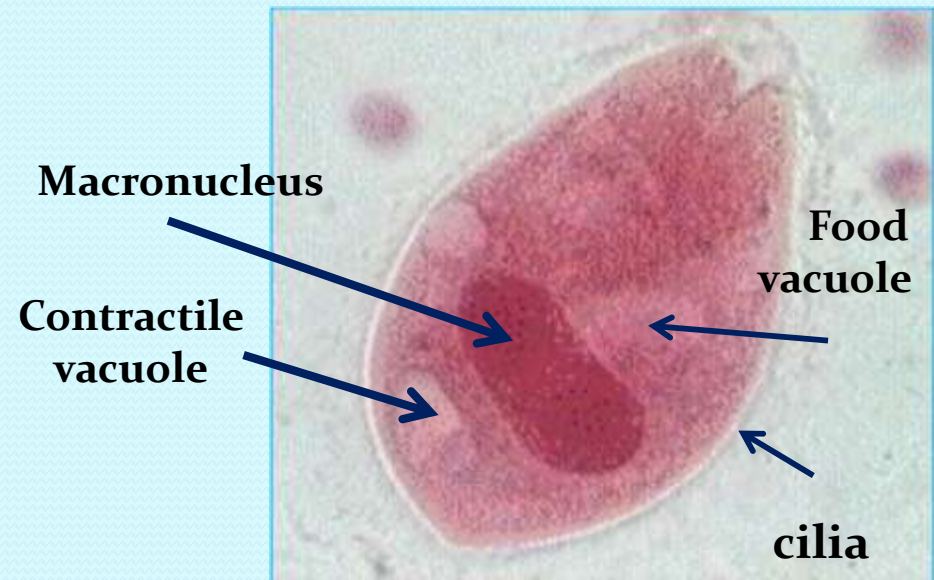
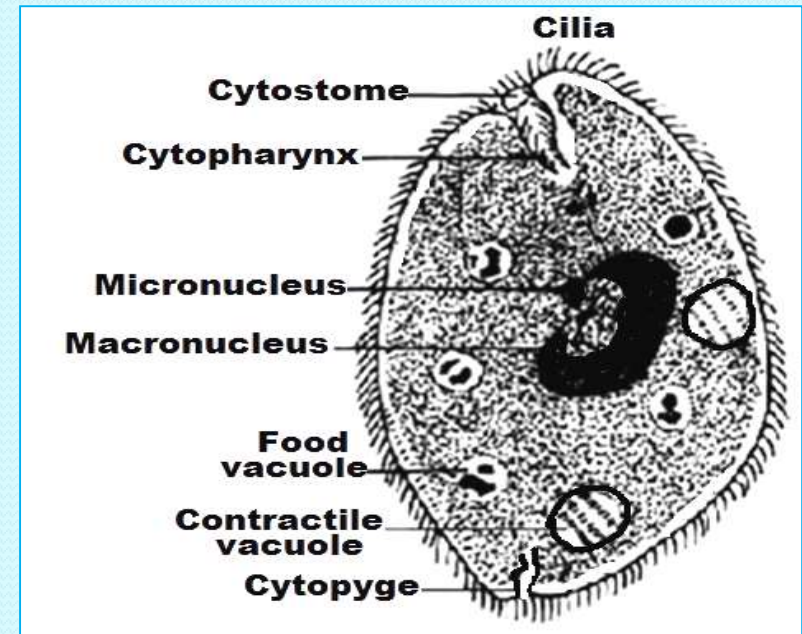




# *Balantidium coli*

## 1-Trophozoite stage

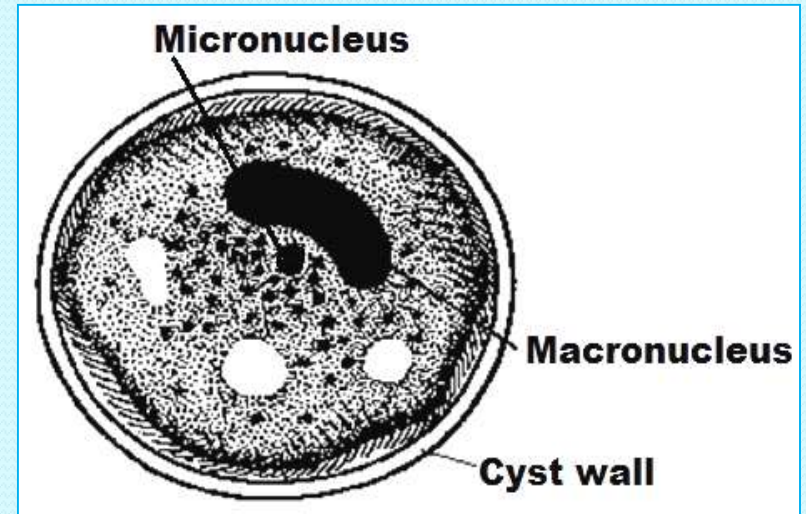
- Oval with pointed anterior end and rounded posterior end.
- Contains numerous food vacuoles, 2 contractile vacuoles, macronucleus & micronucleus
- Cytostome & Cytopharynx



# *Balantidium coli* cyst

## **Cyst (D.S&I.S)**

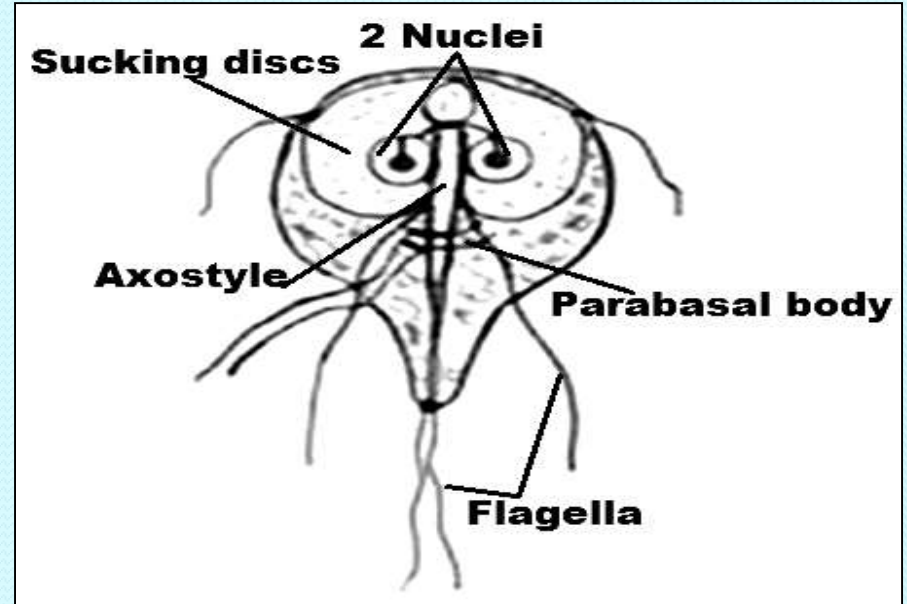
- Rounded with thick double cyst wall.
- Contains a single parasite, food vacuoles, macronucleus and micronucleus



# *Giardia lamblia*

## 1-Trophozoite stage

- ❖ Shape: pear in shape with convex dorsal surface & flat ventral surface
- ❖ 2 sucking discs for attachment.
- ❖ 2 oval nuclei with central karyosomes anteriorly.
- ❖ Four pairs of flagella.
- ❖ Axostyle: 2 central rods in the middle
- ❖ Parabasal body: 2 rods across the axostyle.



# *Giardia lamblia* cyst

## 2- Cyst (I.S)

- ❖ Size: 12x 7 mm
- ❖ Shape: oval with thick cyst wall
- ❖ Contents:
  - 4 nuclei at one pole
  - Fine granular cytoplasm with remnants of flagella, axostyle & parabasal bodies

