Parasites 3
Medical protozoology

Medical parasitology is classified into

Medical helminthology

Deals with parasitic worms

1-Phylum : Platyhelminthes (flat worms)

- Class: Trematoda
- Class: Cestoidea

2-Phylum : Nemathelminthes (round worms)

- Class:Nematoda

Medical protozoology

Deals with unicellular parasites

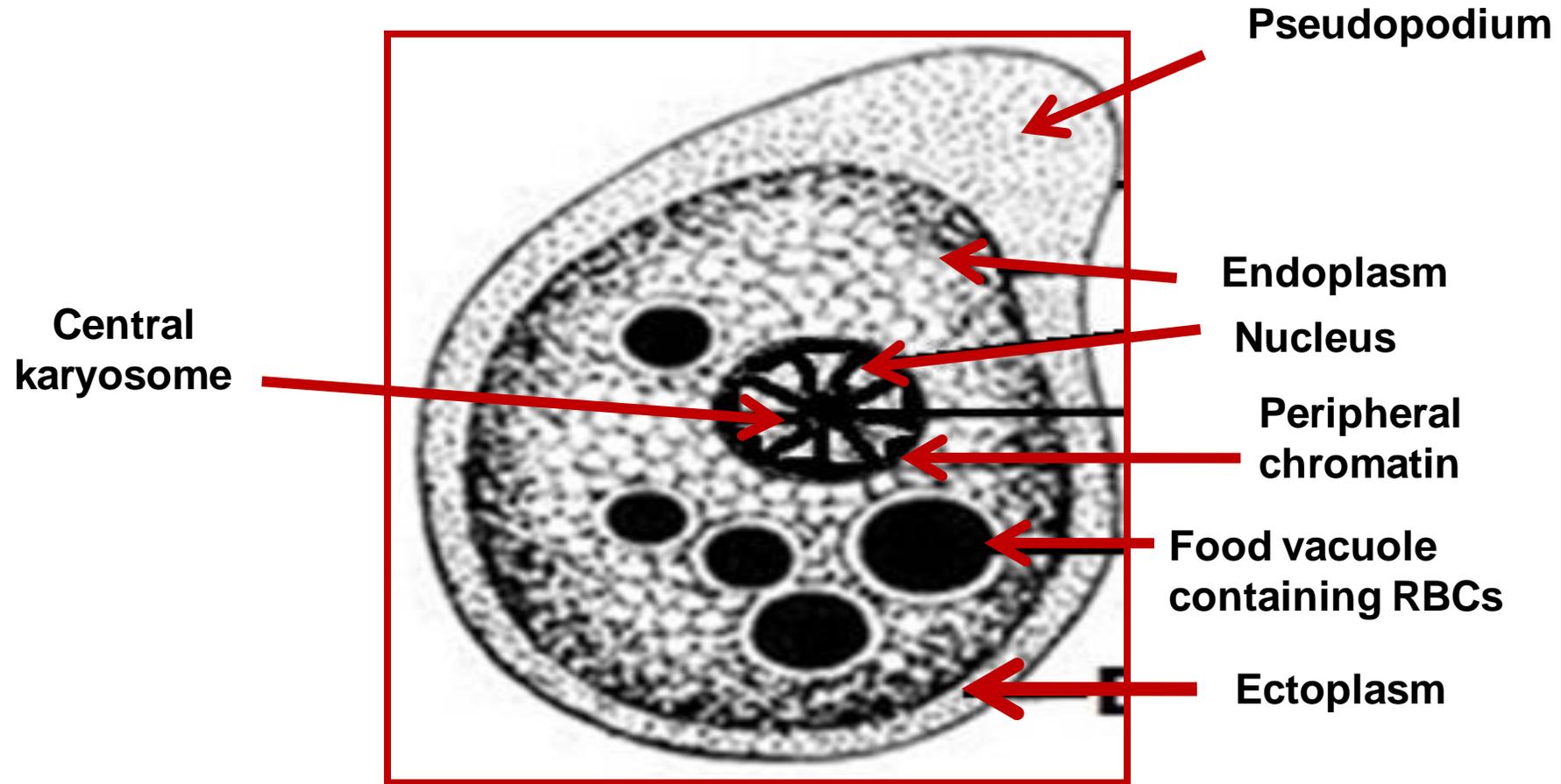1-Class: Rhizopoda:

(move by pseudopodia)

2- Class: Ciliata

(move by cilia)

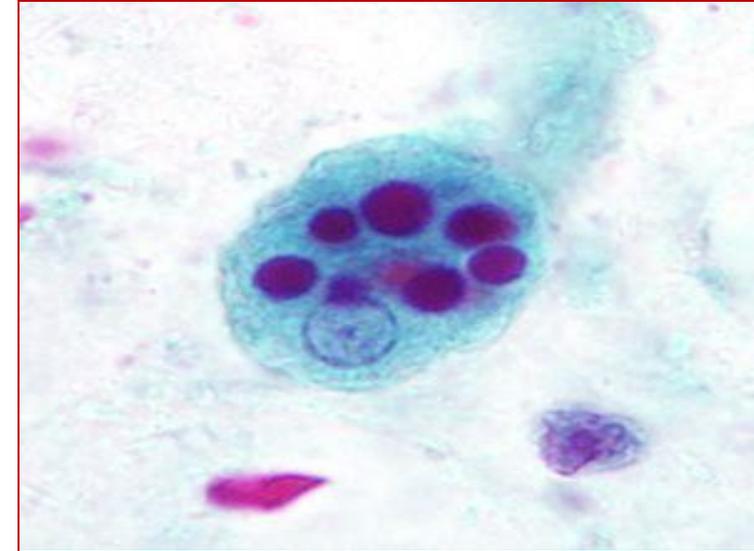3-Class: Zoomastigophora

(move by flagellae)

4-Class: Sporozoa

(move by gliding movement)

Entamoeba histolytica Trophozoite

Pseudopodium

Endoplasm

Nucleus

Peripheral chromatin

Central karyosome

Food vacuole containing RBCs

Ectoplasm

Entamoeba histolytica Trophozoite

- 20 um
- **Cytoplasm**: differentiated
- Pseudopodia: finger shaped
- RBCs: present
- Bacteria: absent
- **Nucleus**: one with small central karyosome & fine regularly arranged peripheral chromatin granules
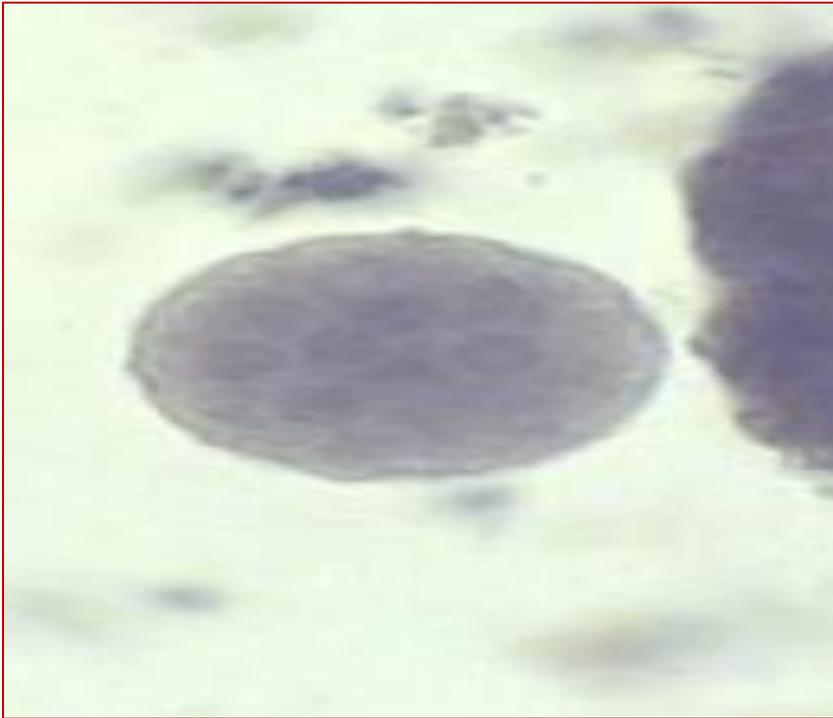- **Motility**: active

Entamoeba histolytica mature cyst

Glycogen vacuole

Nuclei

Chromatoid body

- D.S & I.S
- 15 um
- Rounded with thick cyst wall.
- Contain4 nuclei.
- One chromatoid body.
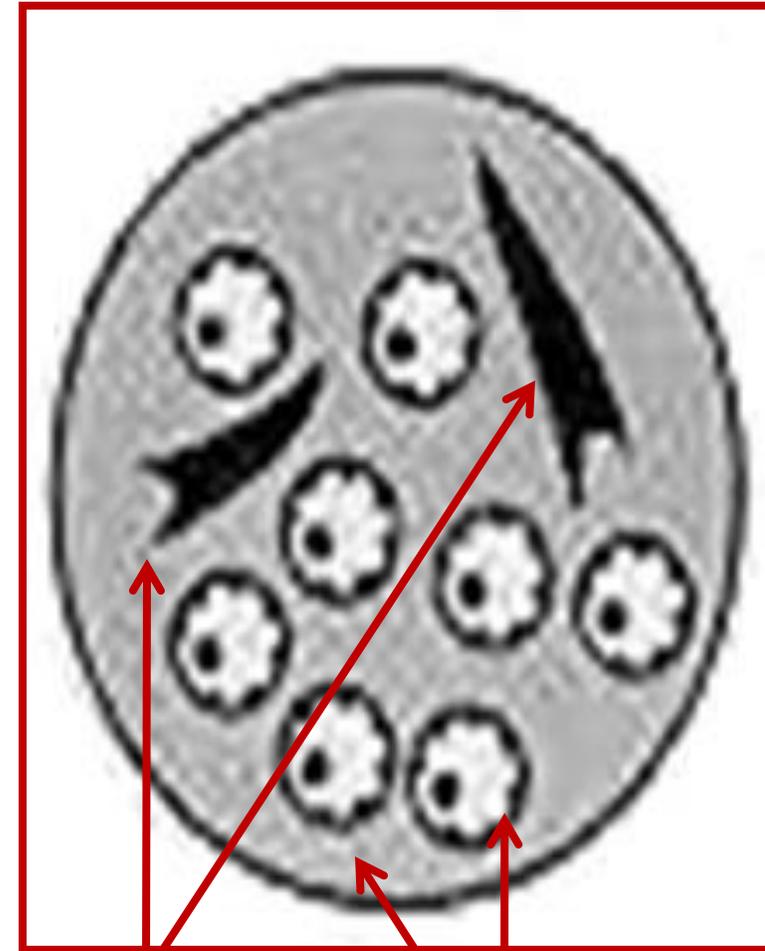- Glycogen vacuole.

Entamoeb coli trophzoite

- **25 um**
- **Cytoplasm**: not differentiated
- **Pseudopodia**: Short & blunt.
- **RBCs**: absent
- **Bacteria**: present
- **Food vacuoles** : present
- **Nucleus:** one with large eccentric karyosome & coarse irregularly arranged peripheral chromatin granules
- **Motility:** sluggish

Entamoeba coli cyst

- 20 um

- Rounded.

- Contain 8 nuclei

- Bundle or splinter shaped chromatoid bodies.

Chromatoid bodies

Nuclei

Laboratory diagnosis

In intestinal amoebiasis:

- Examination of a fresh dysenteric fecal specimen for trophozoite stage. (Motile amoebae containing red cells are diagnostic of amoebic dysentery).

- Examination of formed or semi formed feaces for cyst stage.

E. histolytica trophozoites can also be identified in aspirates or biopsy samples obtained during colonoscopy or surgery

Antibody Detection

Enzyme immunoassay (EIA) kits for *Entomoeba histolytica* antibody detection as well as EIA kits for antigen detection

Thank You