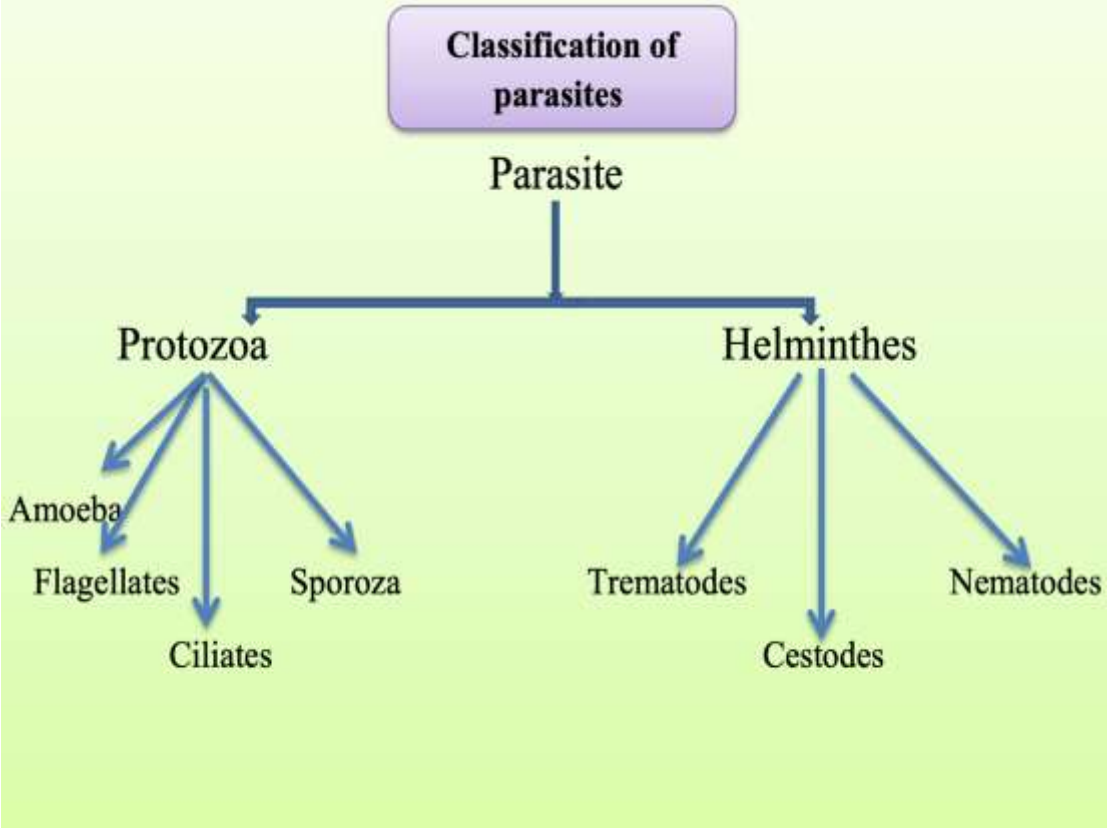
Medical parasitology :- is that branched of medical sciences that deals with parasites.

Parasite :- organisms that live on or in host to obtain their nutrients from another organism and causing harm to the host.



Parasitology Lab

The lab using to diagnosis of parasite disease is based on detection of parasite or one of its stage (egg, larva) in specimens (direct diagnosis) or detection of antibodies against parasite (indirect diagnosis).

The instruments use in lab.

١-Microscope

٢- Centrifuge

٣- ELISA

٤- Fluorescent technique

٥- Polymerase chain reaction

Lab diagnosis

Laboratory diagnosis depending on the nature of the parasitic infections the following specimens are selected for laboratory diagnosis:

١. **Blood –** in those parasitic infections where the parasite itself in any stage of its development circulates in the blood stream, examination of blood film forms one of the main procedures for specific diagnosis. For example, in malaria.

٢. **Stool –** examination of the stool forms an important part in the diagnosis of intestinal parasitic infections and also for those helminthic parasites that localize in the biliary tract and discharge their eggs into the intestine.

٣. **Urine –** when the parasite localizes in the urinary tract.

٤. **Sputum –** examination of the sputum is useful in case where the habitat of the parasite is in the respiratory tract.

Indirect evidences – changes indicative of intestinal parasitic infections are:

a. **Cytological changes in the blood**

- Eosiniphilia often gives an indication of tissue invasion by helminthes.
- A reduction in white blood cell count is an indication of kala-azar.
- Anemia is a feature of hookworm infestation and malaria.

b. **Serological tests** – are carried out only in laboratories where special antigens are available.