

3- Flagellates of the blood stream and tissues of the body.

Kingdom: Protista

Phylum: Protozoa

Subphylum: Sarcomastigophora

Class: Mastigophora

Sub Class: Zoomastigophorea

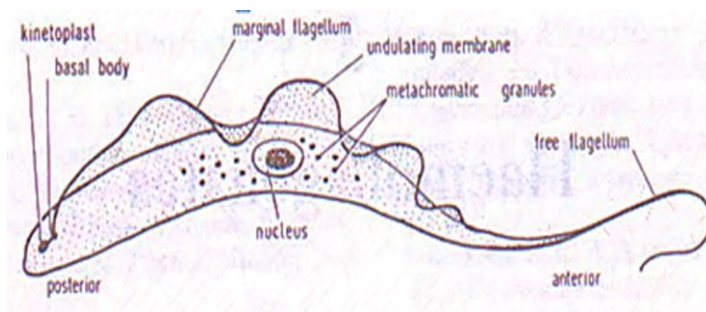
Order: Kinetoplastida

Family: Trypanosomatidae

Trypanosoma cruzi

Trypanosoma brucei gambiense

Trypanosoma brucei rhodesiense



Morphology

spindle shaped elongated body; polymorphic; nucleus centrally located with karyosome; kinetoplast found at the posterior end of the body; undulating membrane originating from the blepharoplast and Anterior flagellum runs along the edge of undulating membrane.

Habitat: extracellular in blood & tissues

Final host: man

Infective stage: Metacyclic trypomastigote

Intermediate host: *Triatoma* sp. (Triatomid bug) for *T. cruzi*

Glossina sp. (tsetse fly) for *Trypanosoma gambiense* and *Trypanosoma rhodesiense*



Triatoma sp.



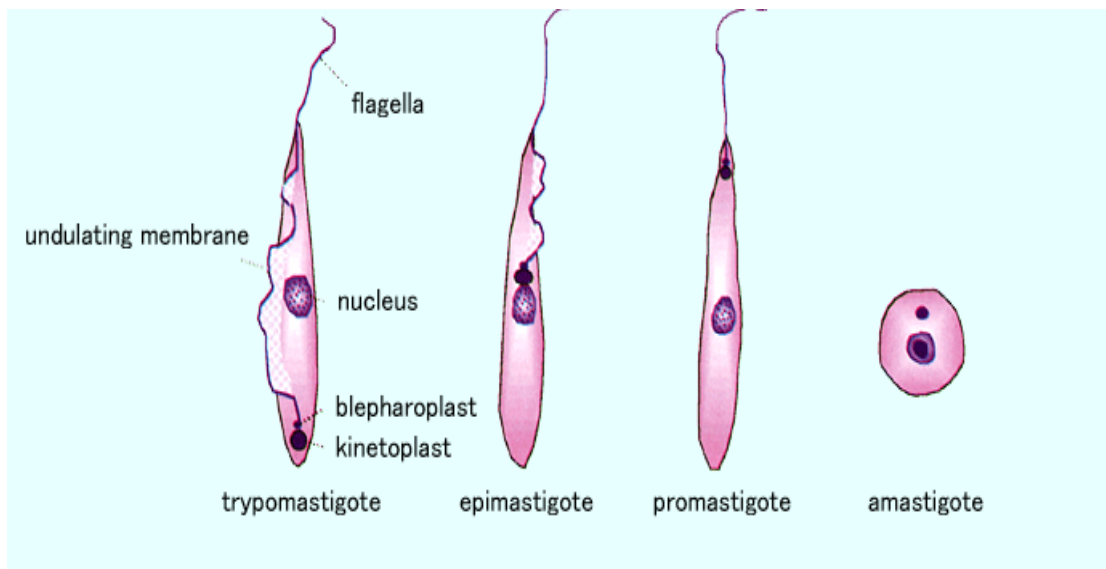
Glossina sp. (tsetse fly)

Laboratory diagnosis:

1. Microscopic demonstration of parasite stained blood smear or lymph node aspirate.
2. Serological test

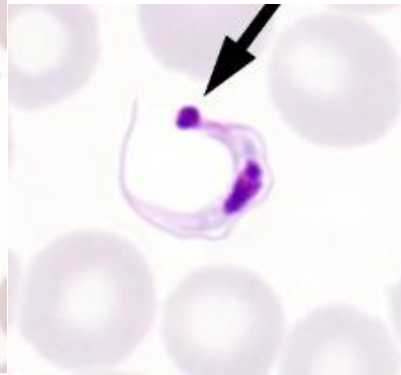
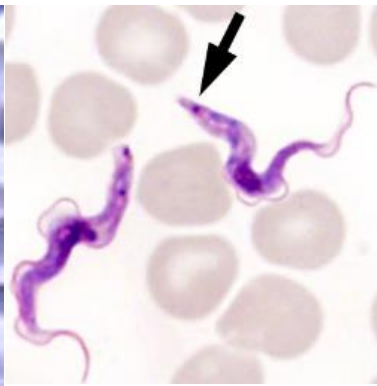
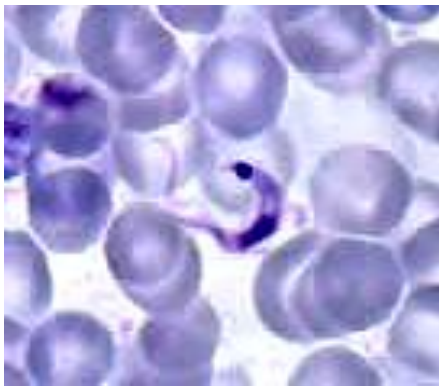
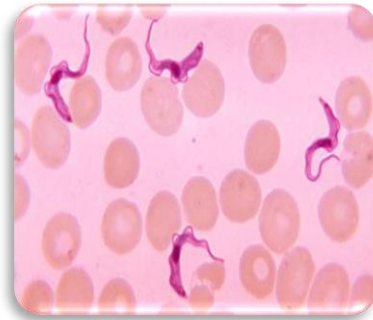
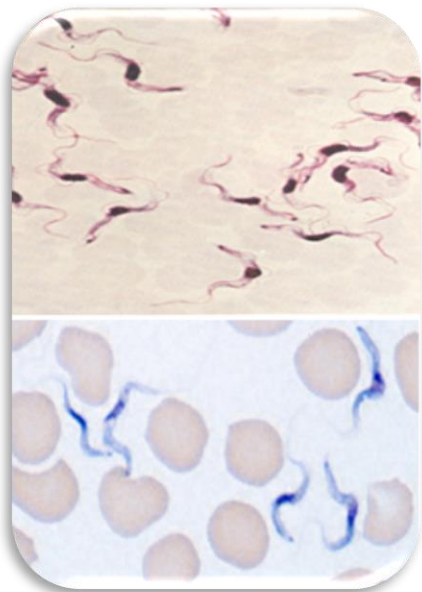
The species of the *Trypanosoma* may have 4 stages (forms) in their life cycle:

- a- **Leishmanion stage** (amastigote)
- b- **Leptomonad stage** (promastigote)
- c- **Crithidial stage** (epimastigote)
- d- **Trypanosomal form** (trypomastigote)



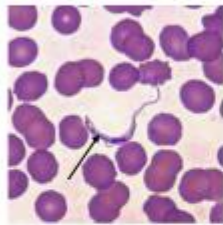
Two distinct forms occur in humans

	<i>Trypanosoma cruzi</i>	<i>Trypanosoma gambiense</i> <i>Trypanosoma rhodesiense</i>
1.	causes Chagas's disease or American trypanosomiasis.	1.larger than <u>T. cruzi</u> ; causes sleeping sickness or African trypanosomiasis.
2.	It is (C) shape	2- S- shape
3.	large kintoplast near the pointed posterior end	3- Have small kintoplast near posterior end.
4.	vector: Triatomid bug (<i>Traiatoma</i> spp)	4- vector: Tsetse fly (<i>Glossina</i> spp.)



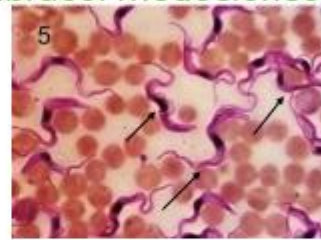
Trypanosoma brucei causing Sleeping Sickness

West Africa
T. brucei gambiense



Reservoir host:
goats, cattle & pigs

East Africa
T. brucei rhodesiense



Reservoir host:
wild game animals