



همه روز روزه بودن، همه شب نماز کردن

ز مدینه تا به کعبه، سر و پا برهنه رفتن

به مساجد و معابد، همه اعتکاف جستن

شب جمعه ها نخفتن، به خدای راز گفتن

به خدا که هیچکس را، ثمر آنقدر نبخشد

همه سال حج نمودن، سفر حجاز کردن

دولب از برای لیبک، به وظیفه باز کردن

ز ملاهی و مناهی، همه احتراز کردن

ز وجود بی نیازش، طلب نیاز کردن

که به روی نا امیدی، در بسته باز کردن

اي راز شگفت آفرينش اي آينه جمال هستي اي بحر هميشه در تلاطم اي آيت عشق جاودانه سو گند به لوح سبز سو گند	اي راه تو بهترين گزينش وي جلوه ذوالجلال هستي مهر تو به سینه در تبسم اي روح بلند بيكرانه مشتق شده نامت از خداوند
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تک یاخته های خونی- نسجی

ارائه کننده :

دکتر بهرام کاظمی

Trypanosomatidea parasites

1- Leishmania

2- Trypanosoma

Kingdom:

Protista

Phylum:

Euglenozoa

Order:

Kinetoplastea

Family:

Trypanosomatida

Genus:

Leishmania

تاكسونومي ليشمانيا

Subkingdom

Protozoa

Order

Kinetoplastida

Family

Trypanosomatidae

Genus

Crithidia *Leptomonas* *Herpetomonas* *Blastocrithidia* *Leishmania* *Sauroleishmania* *Trypanosoma* *Phytomonas* *Endotrypanum*

Subgenus

Leishmania

Viannia

Complex

L. donovani *L. tropica* *L. major* *L. aethiopica* *L. mexicana*

L. braziliensis *L. guyanensis* *L. naiffi* *L. lainsoni*

Species

L. archibaldi *L. killicki* *L. major* *L. aethiopica* *L. amazonensis*

L. braziliensis *L. panamensis* *L. naiffi* *L. lainsoni*

L. chagasi *L. tropica*

L. garnhami

L. peruviana *L. guyanensis*

L. infantum

L. mexicana

L. shawi

L. donovani

L. pifanoi

L. venezuelensis

L. forattinii

Non pathogenic for humans
Old World

L. arabica
L. gerbilli
L. turanica

New World

L. aristidesi
L. enrietti
L. deanei
L. hertigi

No final classification
L. colombiensis
L. equatorensis

Forms of trypanosomatidea parasites

1- Amastigote

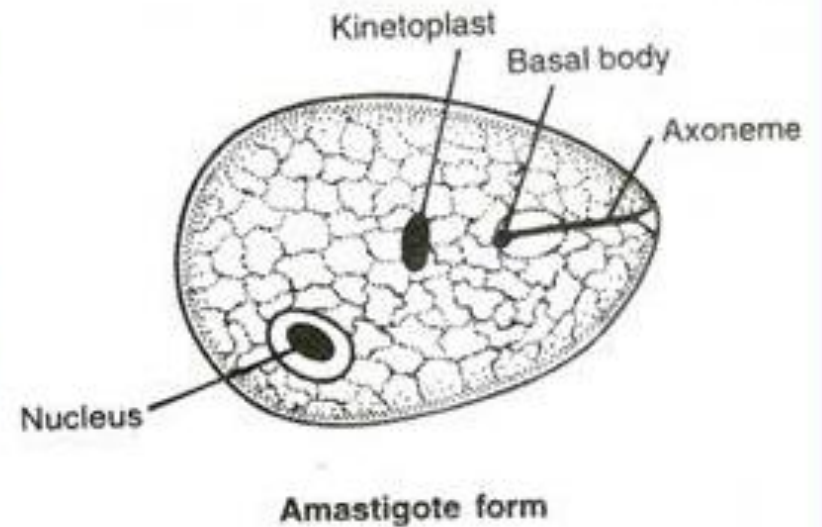
(Leishman- donovan body)

amastigote have a nucleous and

extrachromosomal or mitochondrial DNA

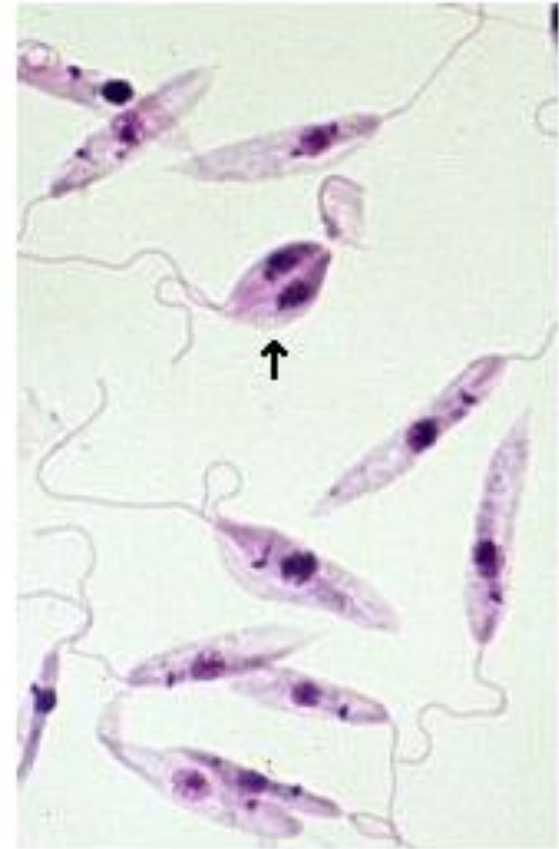
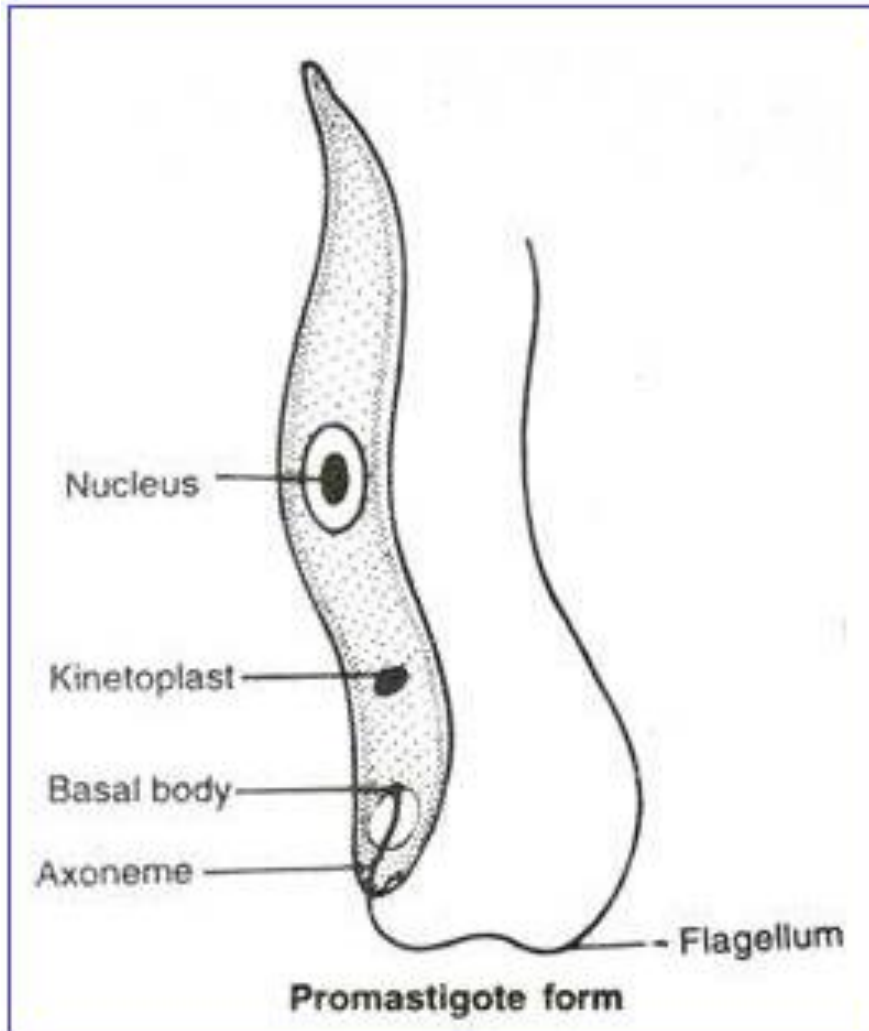
(historical named as kinetoplast)

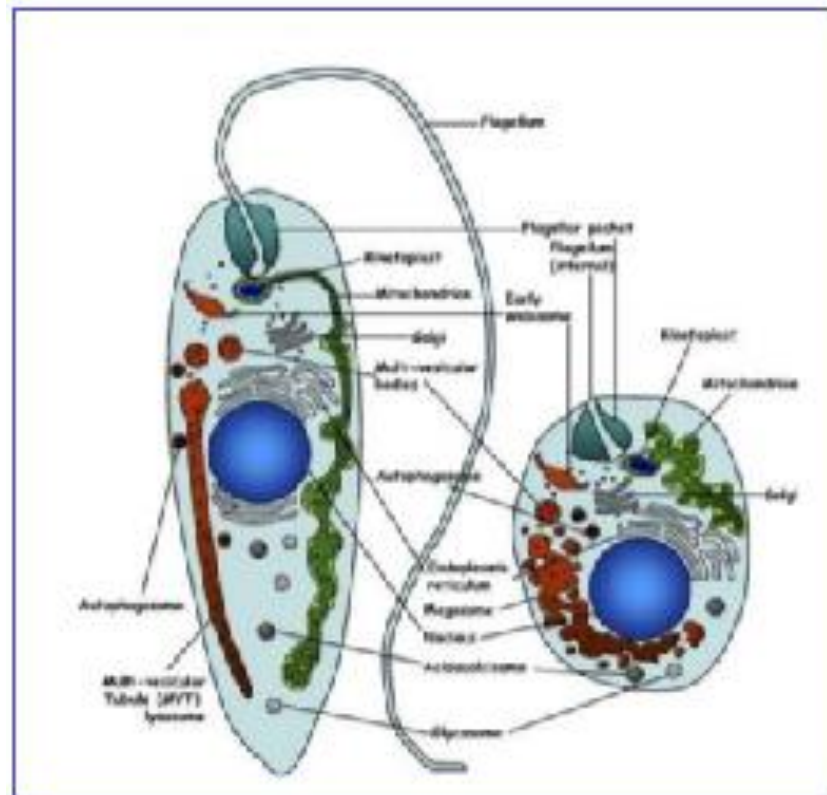
Amastigote



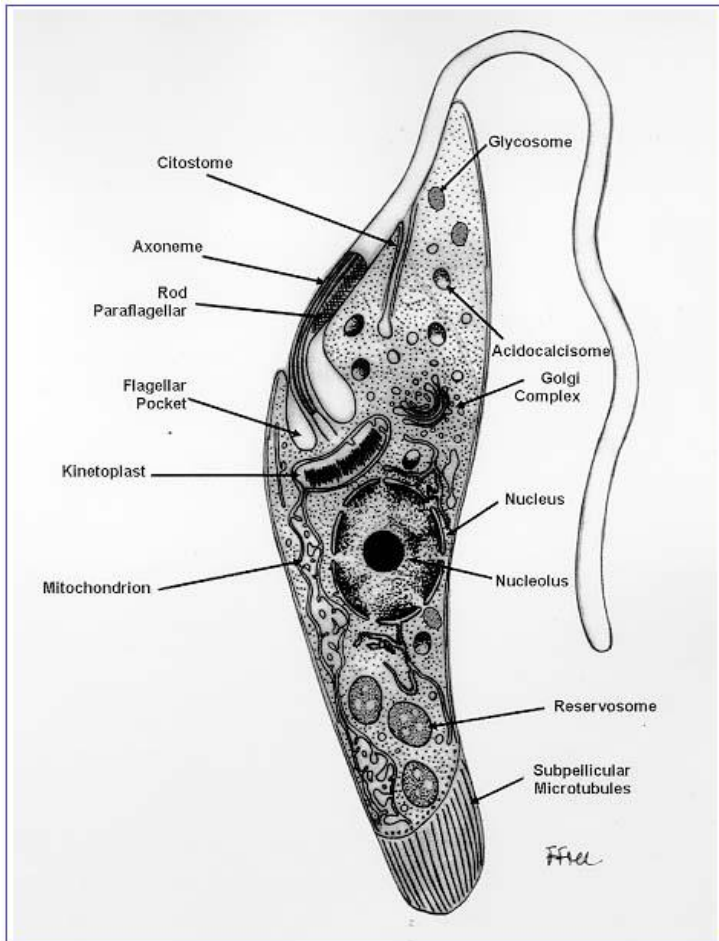
2- Promastigote form (Leptomonad)

Promastigote





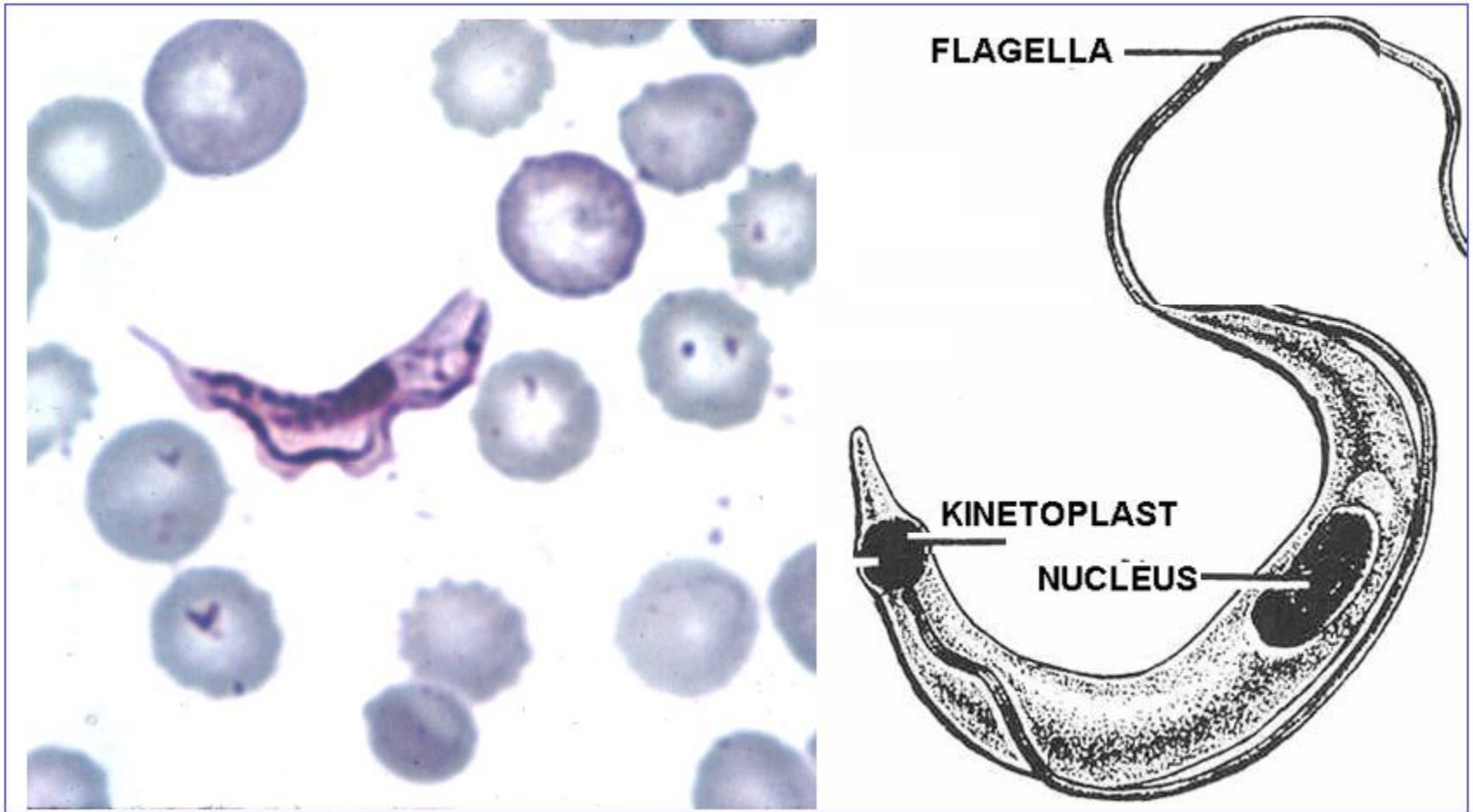
3- Epimastigote (Crithidia)

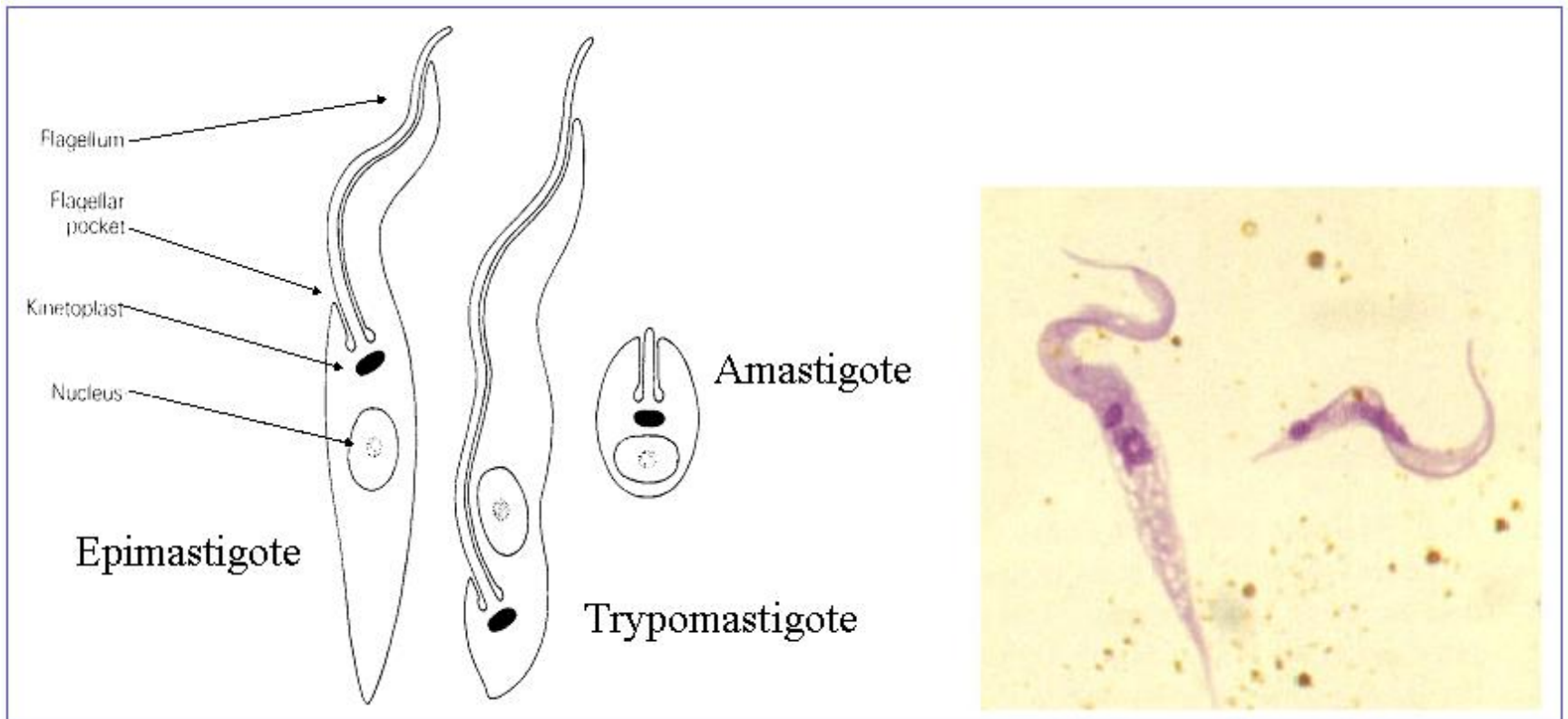


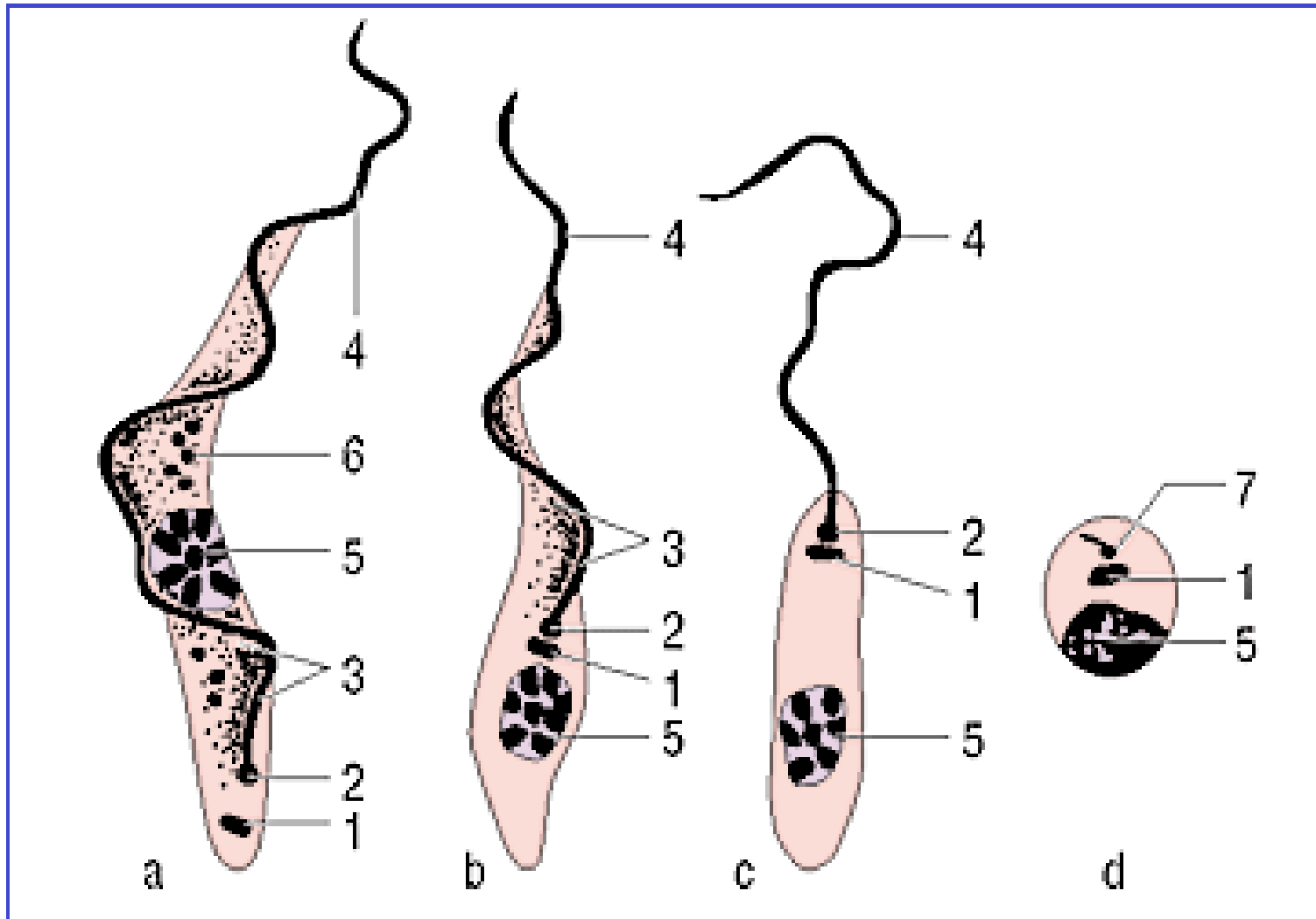
4- Trypomastigote

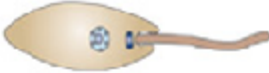





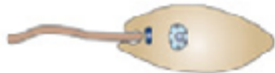

(Trypanosome form)

Trypomastigote





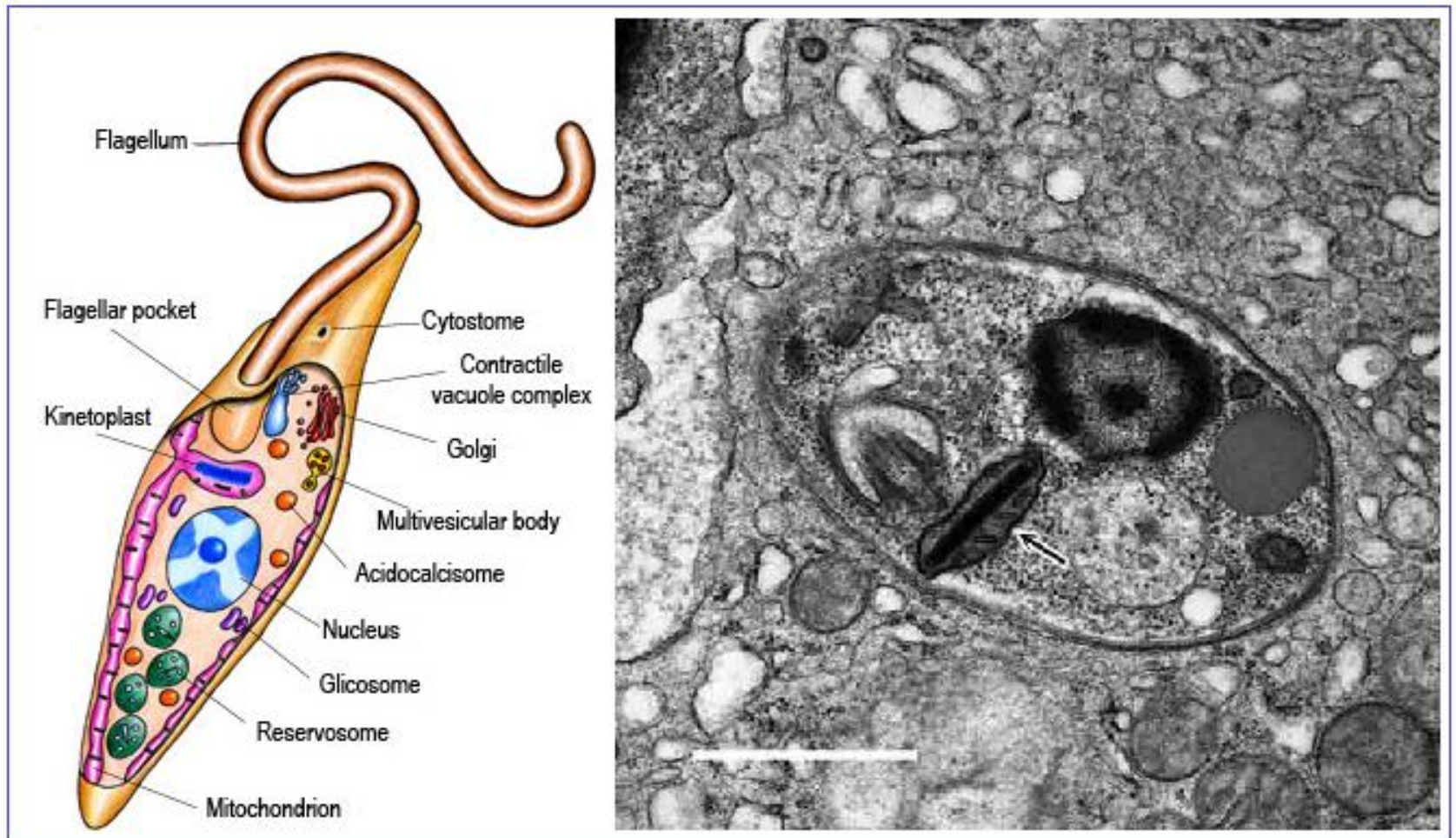


Trypomastigote	Epinastigote	Promastigote	Amastigote	Stage parasite
				Leishmania
				African Trypanosoma
				American Trypanosoma

Cellular characteristic of trypanosomatidae

1- They are eukaryotic cell

**2- They have a single mitochondrion
(Kinetoplast)**



Leishmania and Leishmaniasis

Historical names of leishmaniasis

Dehli`s nodule

Oriental sore

Tropical sore

Dum Dum fever

Asam fever

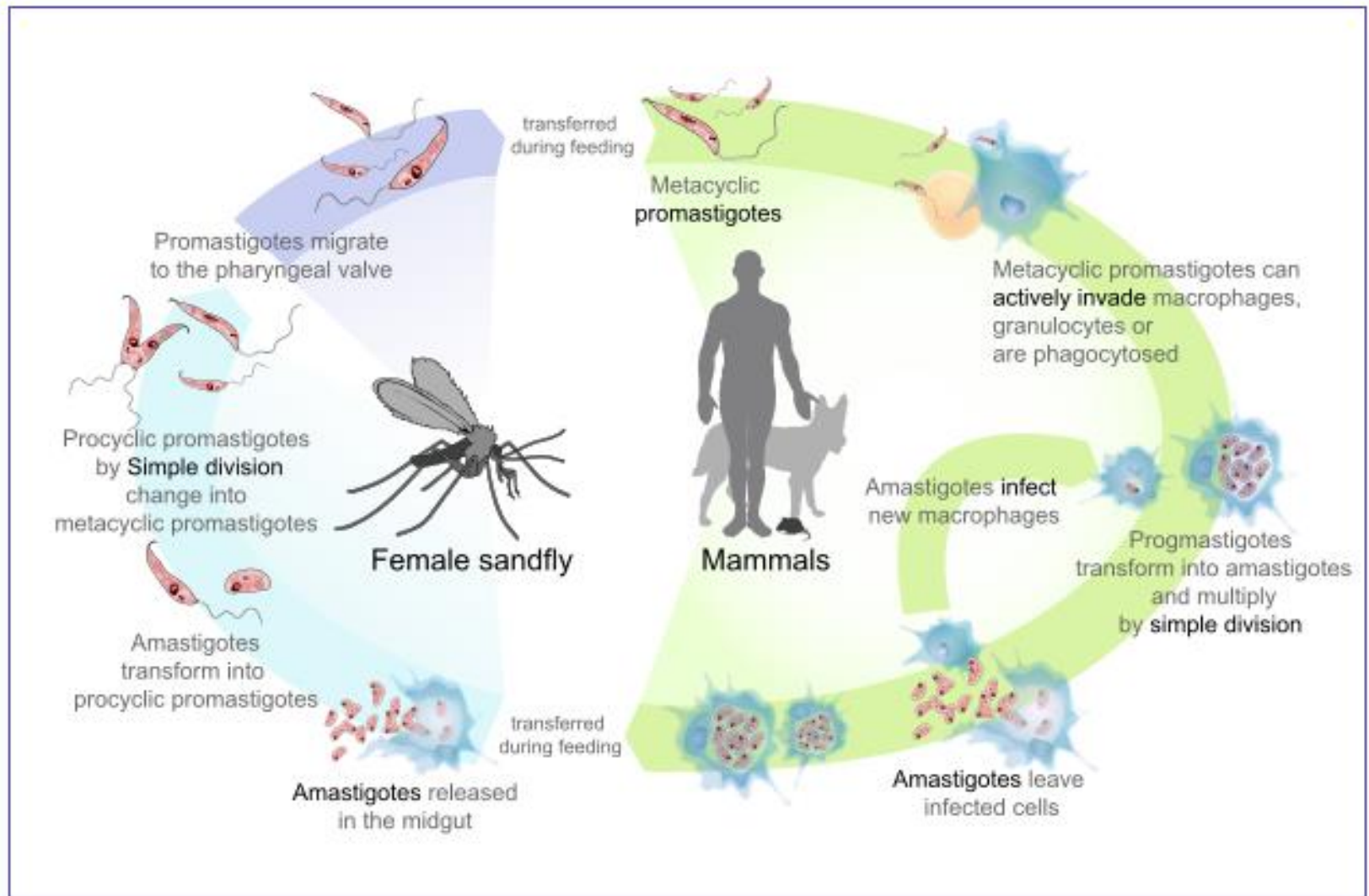
Halab`s knobe

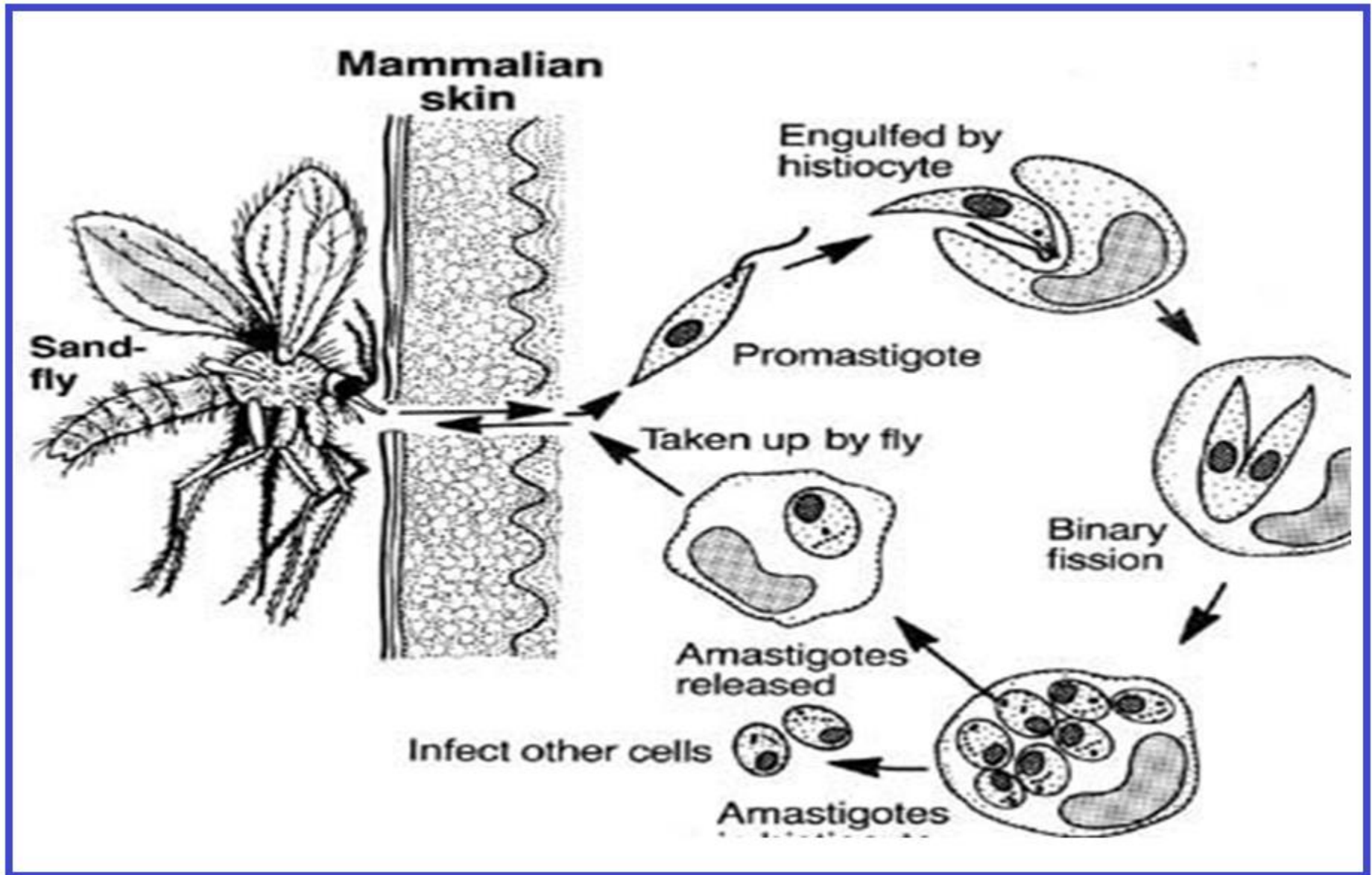
Salak (smal year in Afghanistan)

**This parasite exhibits eukaryotic organization
(its nucleus enveloped (limited) by a
definitive membrane)**

Life cycle of leishmania

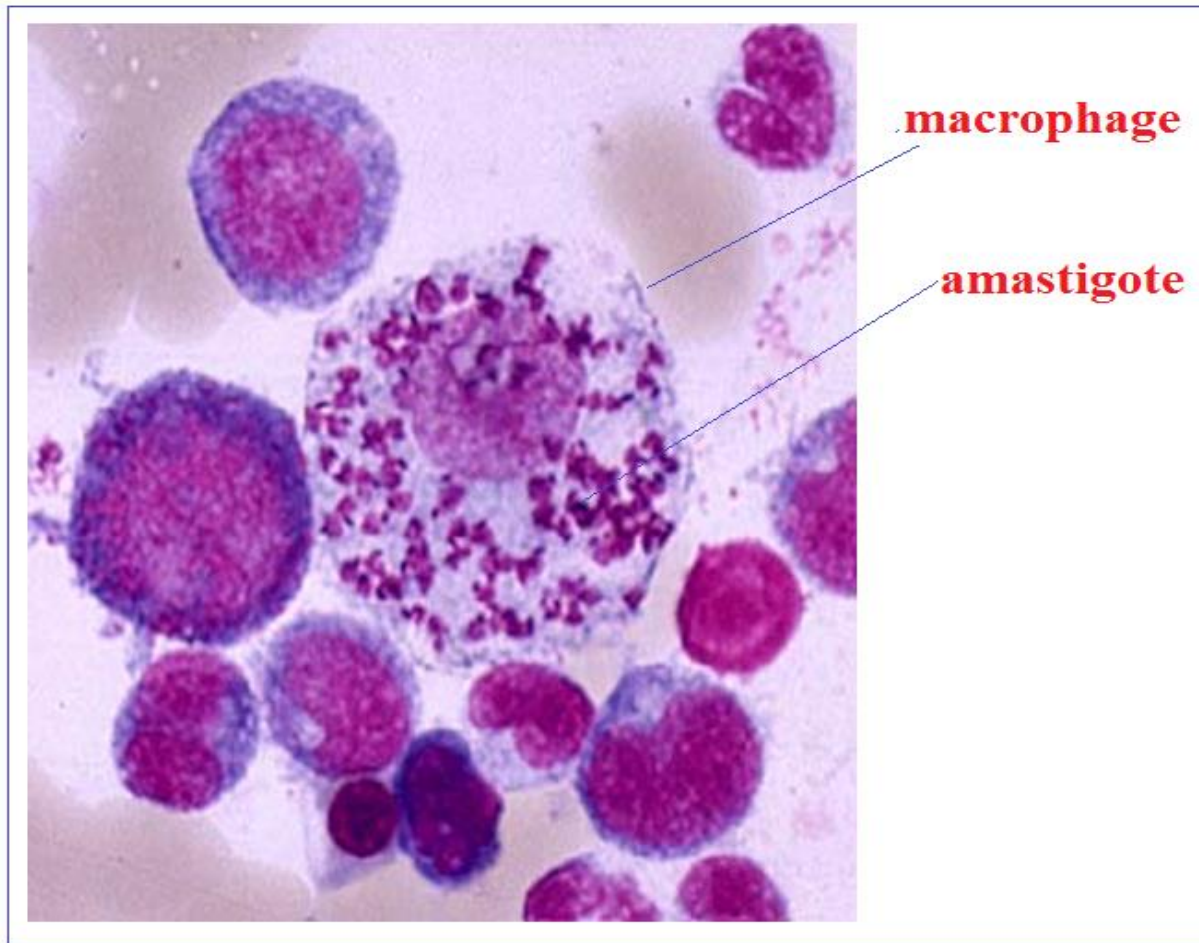
1- Host (human, dog

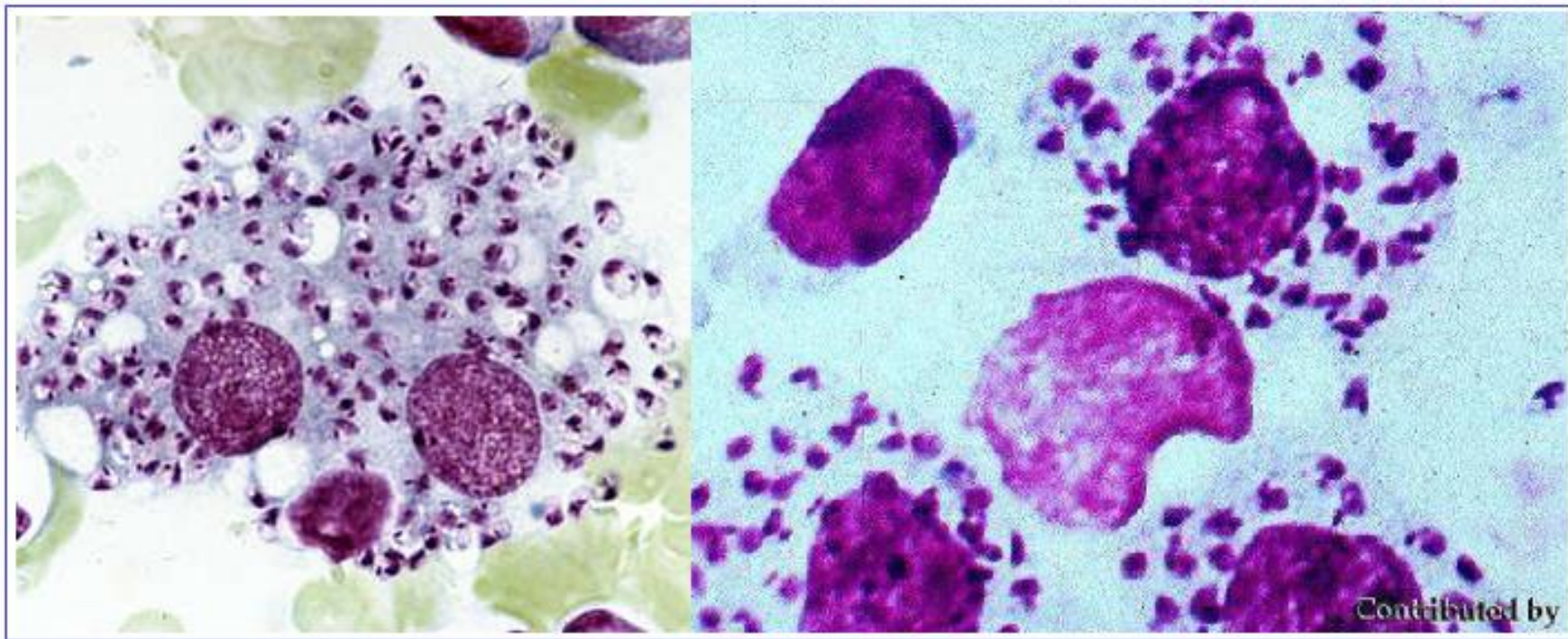




In the mammalian host:

**leishmanial form inside the reticuloendothelial
cells**



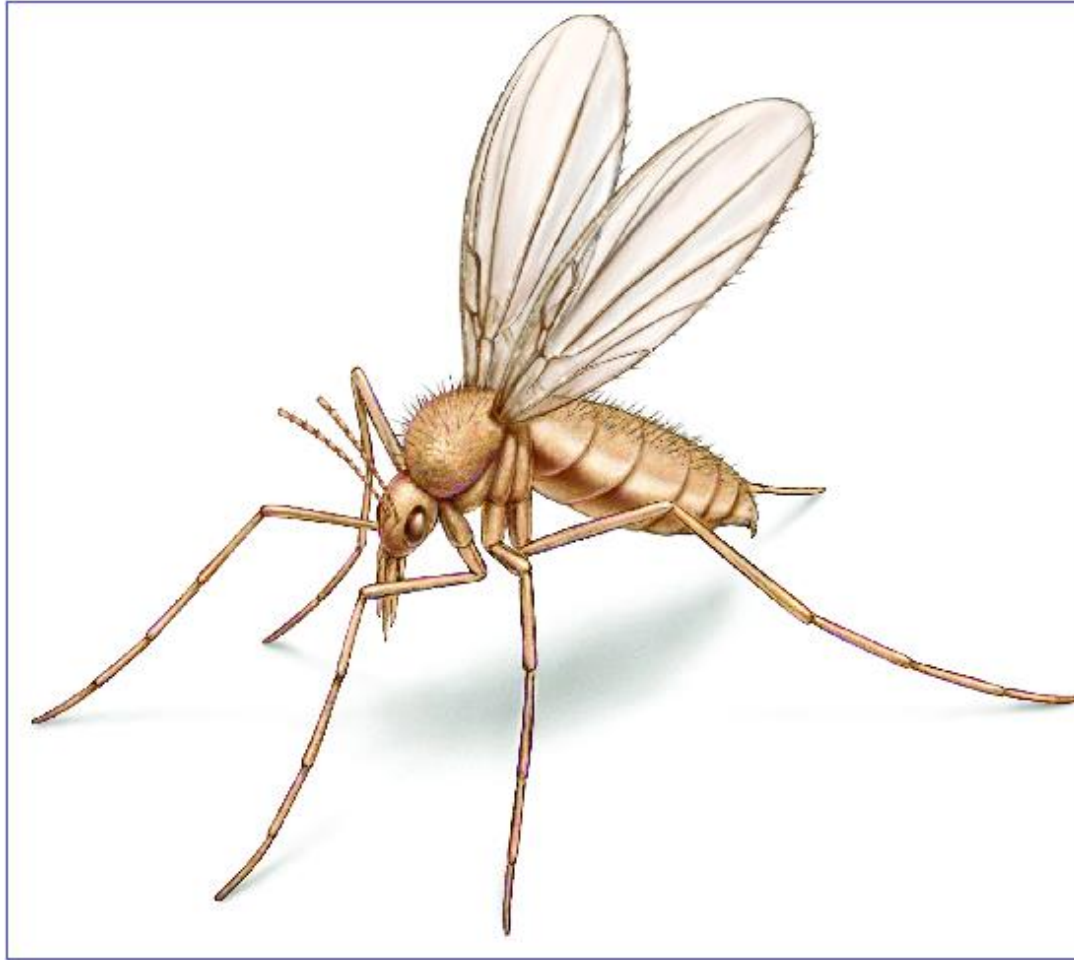


Its size 2-4 micrometer

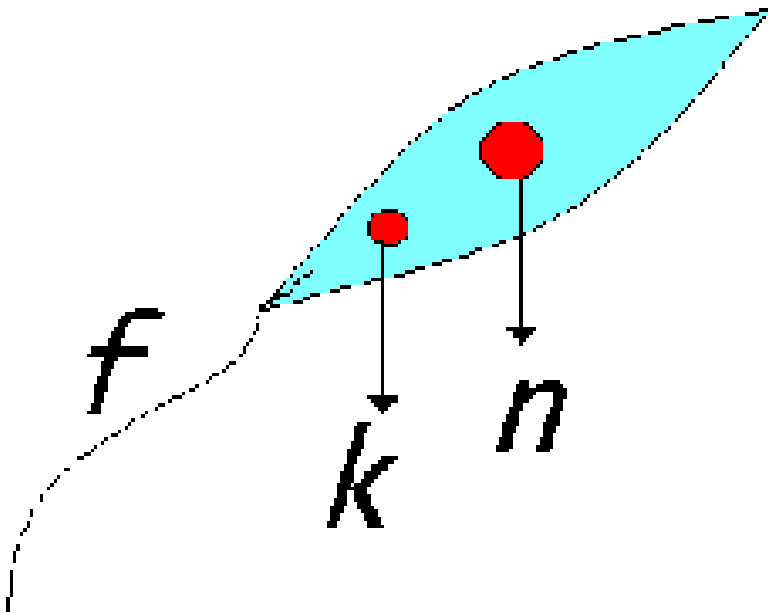
Oval or circular shape

2- vector (sand fly)

Sand fly(as vector for leishmania)



Promastigote in the digestive tract of insect vector



3- Reservoir (fox, rhombomeres)



Leishmania is a zoonotic parasite

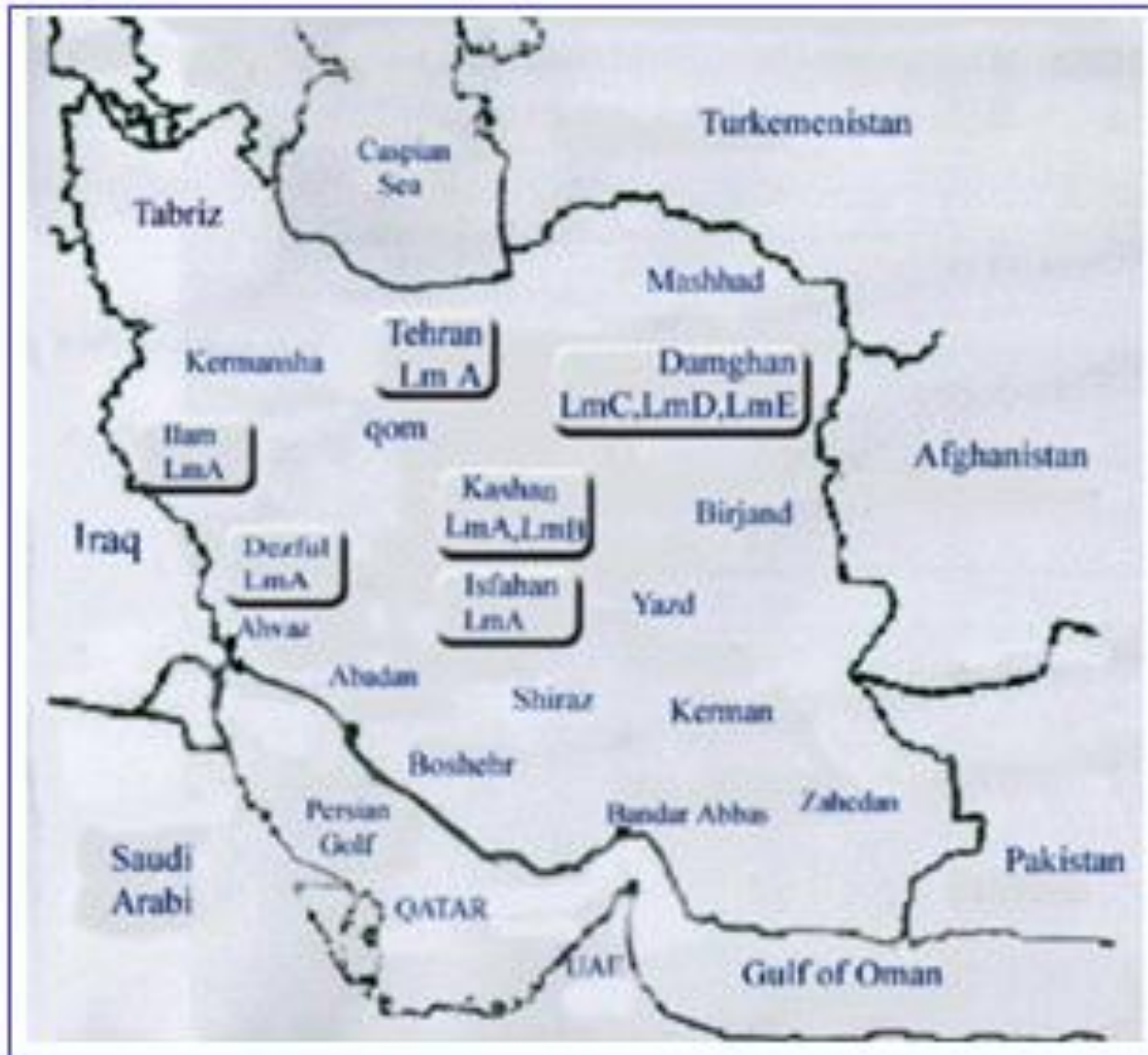
Leishmaniasis in Iran

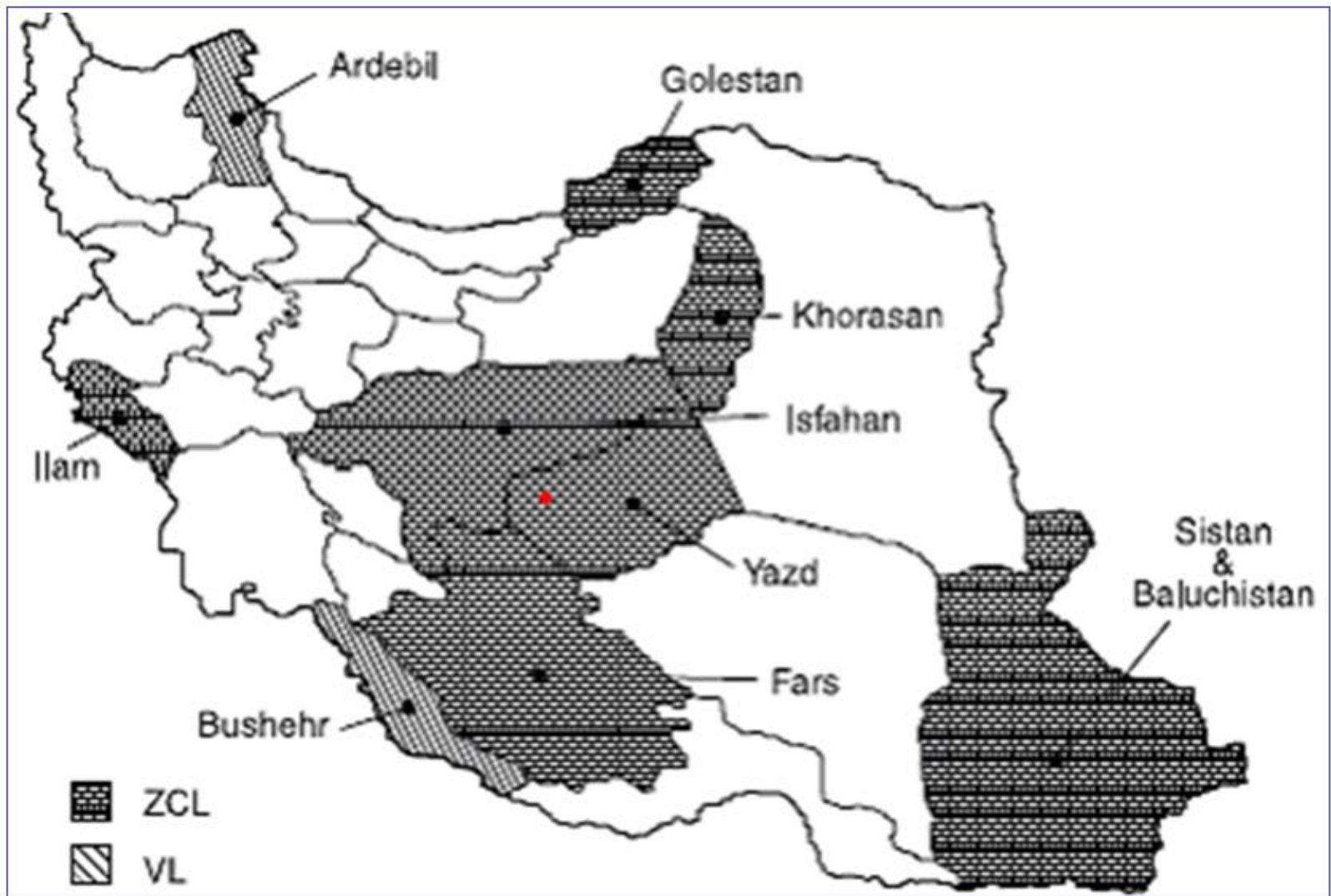
A) Cutaneous leishmaniasis

Anthroponotic cutaneous leishmaniasis

Zoonotic cutaneous leishmaniasis

B) Visceral leishmaniasis





Anthroponotic cutaneous leishmaniasis

Parasite: Leishmania tropica

Vector: phlebotomus sergenti

PPP: 6-8 months

Lesion: 8-10 months

Geographical distribution

Kerman

Bam

Tehran

Yazd

Mashhad

.....

Anthroponotic cutaneous leishmaniasis occurs in several old urban foci, where cases are most often observed in young children (as the older population is immune due to previous contacts with the parasite)

In the district of Bam, there has been an eightfold increase in the number of cases reported after the 2003 earthquake.

There is a seasonal variation in the number of cases with an increase between September and February

Lesions

- 1- Lesion on the face and neck**
- 2- Lesions as closed nodule**
- 3- Classical lesions (not infected by microbial agents) having more than 8-10 months**









Recidivance leshmaniasis



Diffuse cutaneous leishmaniasis



Zoonotic cutaneous leishmaniasis

1- Parasite: Leishmania major

2- Vector : Phelebotomus papatasi

3- Reservoir: rhombomys opimus

1- PPP: 2-3 months

2- Lesion have more 4-6 months

3- lesion will localize on the limbs

1- Seroseous fluid from the wound

**2- The crust on the lesion is composed of dead
neutrophiles and bacteria**

Geographical distribution

1- Esfahan

2- Golestan distrinct (Incheboron- dashly boron- Maraveh tapeh)

3- Lotfabad and Darehgaz

4- Shahrood

5- Ghom

6-Ardestan

7- Ahvaz

Zoonotic cutaneous leishmaniasis, caused by *L. major*, is common in 15 rural provinces and represents approximately 70% of cutaneous leishmaniasis cases in the country

Promastigote form in NNN medium

