

# **LEISHMANIA DONOVANI – Life cycle**

## ***(Part -3)***



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# Leishmania donovani –Lifecycle



## **Life Cycle in Sandfly**

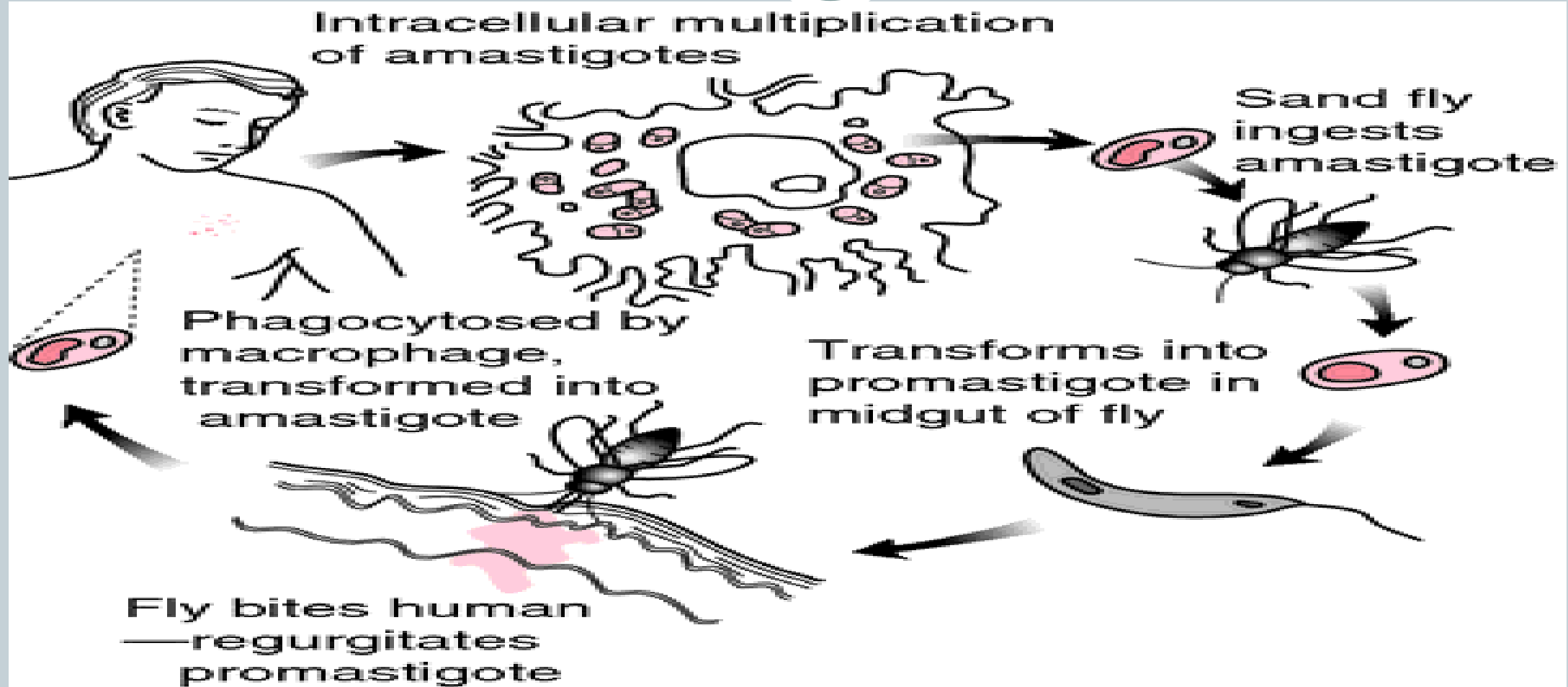
- When a sand fly sucks blood of an infected person, the free amastigotes are ingested .
- In the midgut of sand fly, the amastigotes are transformed into an elongated and flagellated promastigote forms.
- These promastigotes multiply by binary fission and produce large numbers of promastigotes completely filling the lumen of the gut.

## Leishmania donovani –Lifecycle

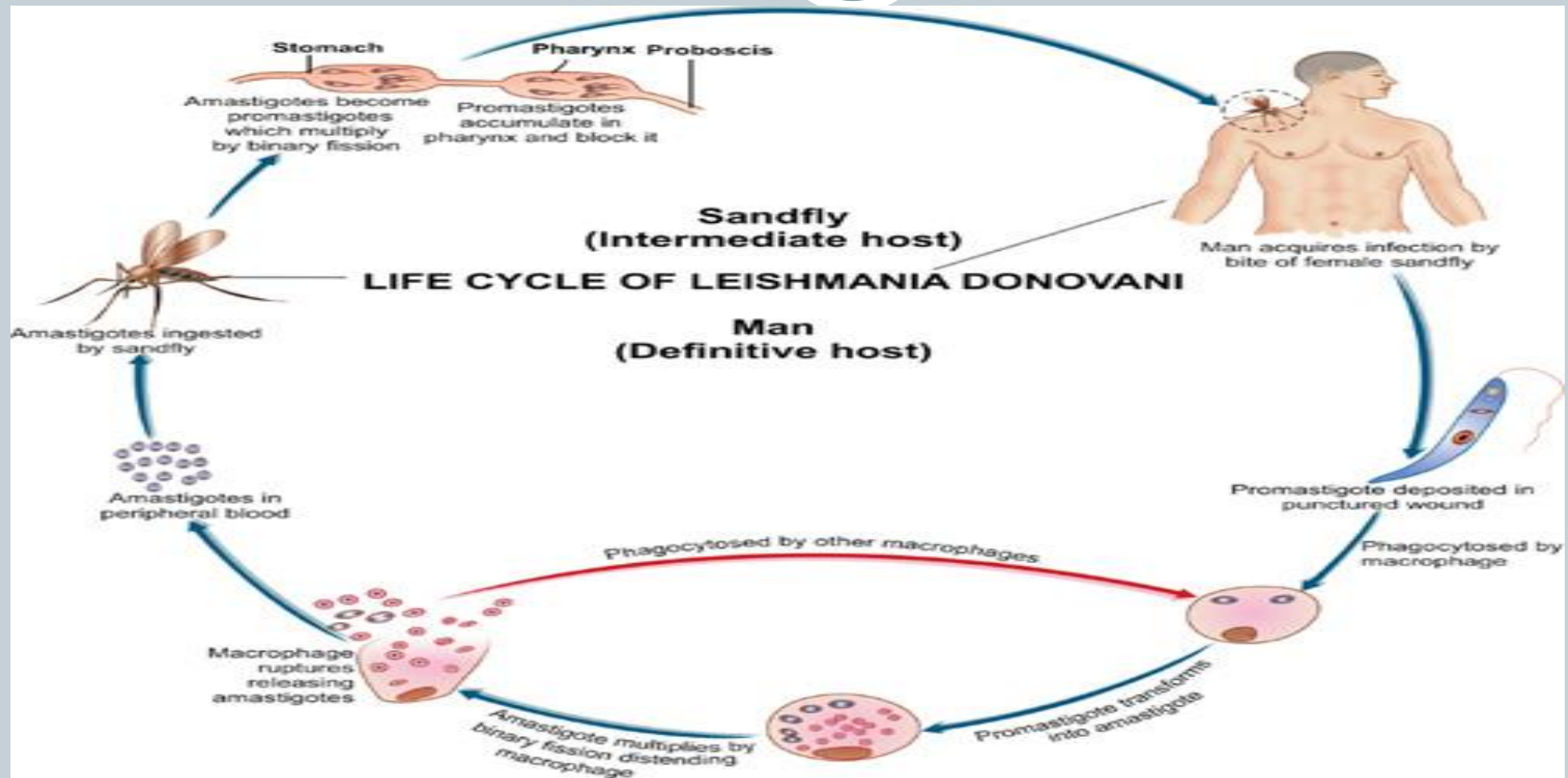


- After a period of 6 to 9 days, the promastigotes migrate from the midgut to the pharynx and buccal cavity of sand fly leading to the heavy pharyngeal infection of the sand fly that feeds on plant juice after first blood meal.
- Bite of sand fly transmits the infection to new host and the cycle is repeated

# Life cycle of *Leishmania donovani*



# Life cycle of *Leishmania donovani*



# Pathogenicity



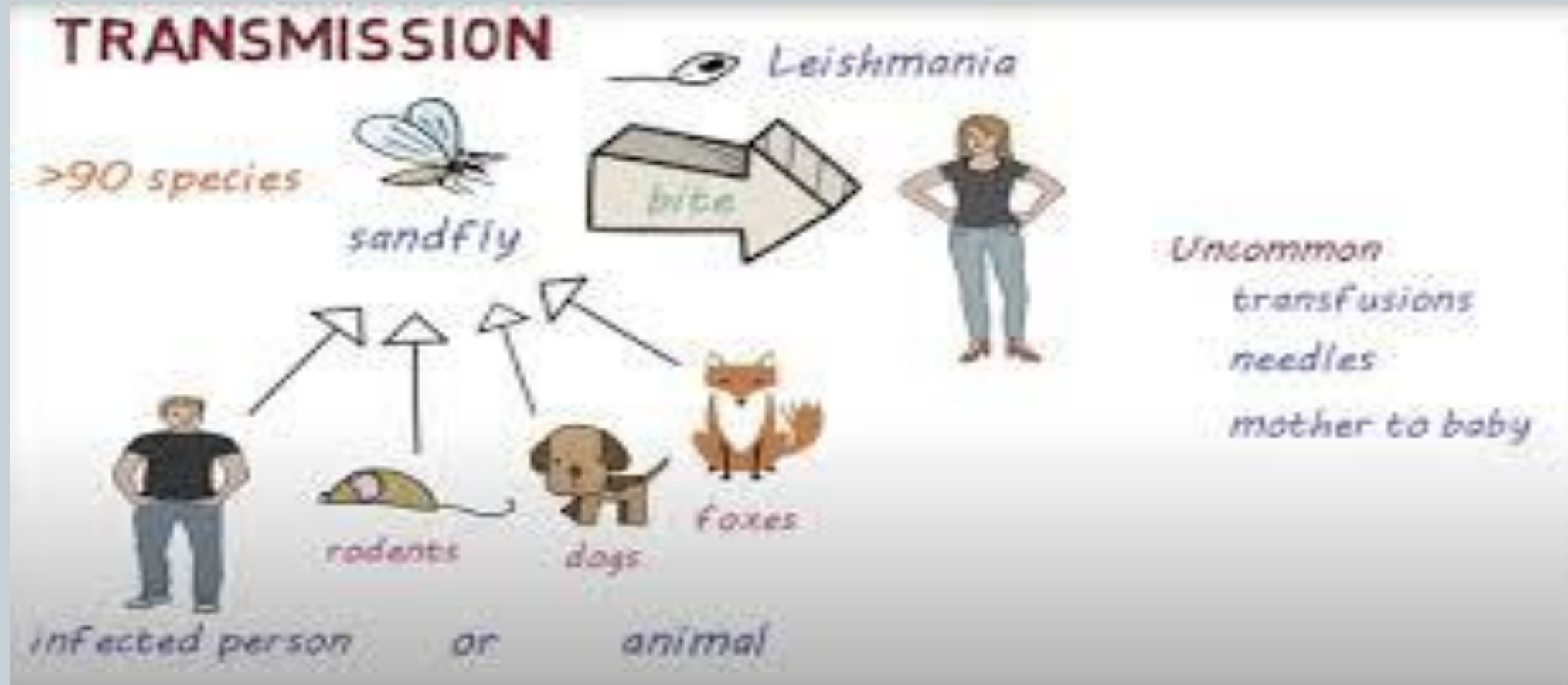
- Leishmania donovani causes leishmaniasis.
- The disease is also known as kala azar or dum dum fever.
- It occurs in India China, Mediterranean countries and parts of Africa and South America.

# Pathogenicity



- Mode of transmission
- The infection is transmitted to human mainly by the bite of vector sandfly .
- Transmission may also take place by contamination of the bite wound or by contact when the insect is crushed during the contact act of feeding.
- Blood transfusion.
- Contaminated syringes and needles.

# Transmission





# *Thank You*

