



Pteropus rufus



Eidolon dupreanum

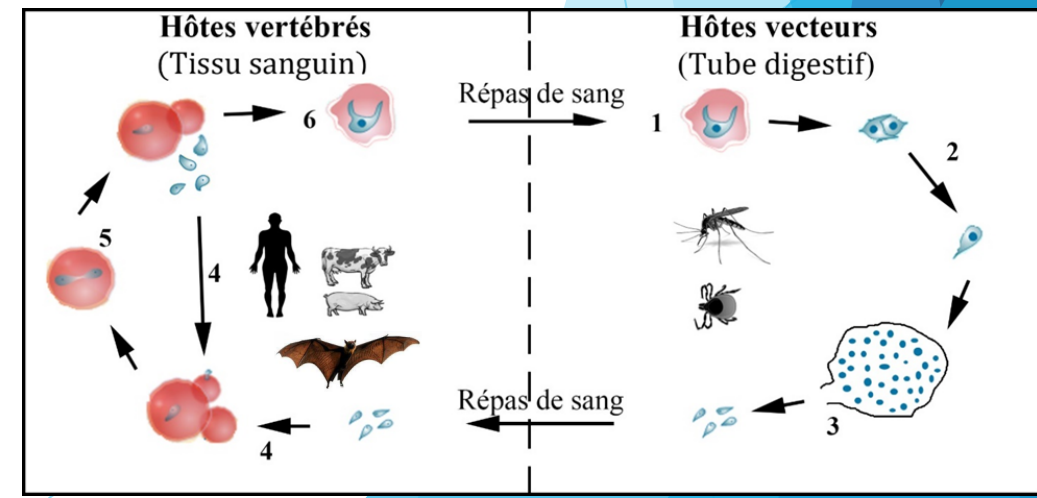


Rousettus madagascariensis



Madagascar fruit bats as host reservoir of blood parasites

- What factors affect the presence of blood parasites
- How blood parasites are maintained within bat population
- Thanks to Cara, Tanjona



What factors affect the presence of blood parasites

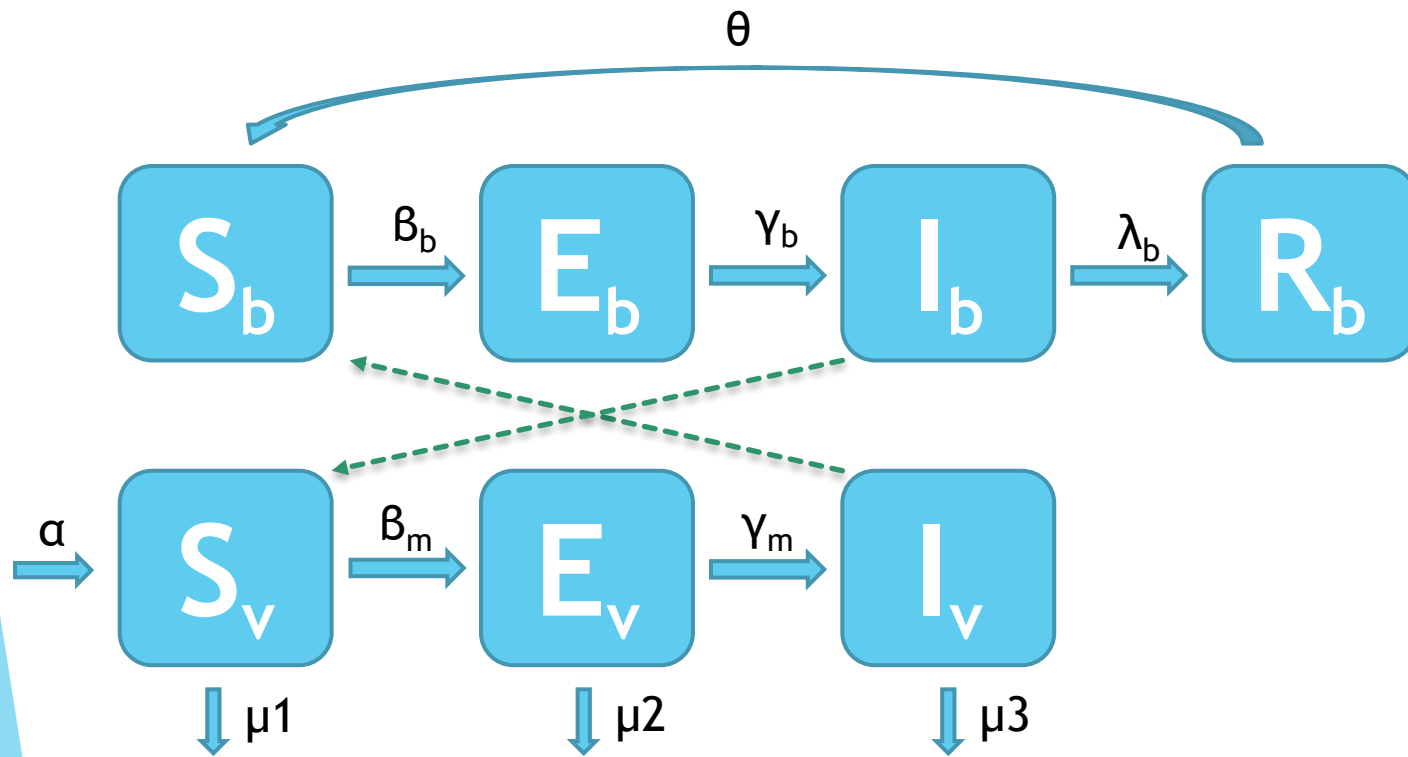
```
glmer(Presence_Absence ~ Size+Weight+Sex+  
      Number_Ectoparasite+  
      Season+(1 | Site),  
      data=mada_bats,  
      family="binomial")
```



Monthly data, collected in different Sites within Madagascar Island

- Bat bio-morphometrics
- Ectoparasite count
- Prevalence of blood parasite (Microscopy, molecular)

How blood parasites are maintained within bat population



S_b: Susceptible bats
E_b: Exposed bats
I_b: Infected bats
R_b: Recovered bats

S_v: Susceptible vector
E_v: Exposed vector
I_v: Infected vector

B: Rate at which individuals become exposed to the parasite

γ : Rate at which exposed individuals become infectious

λ : Rate of recovery

θ: Rate of loss of immunity to the infection

α: Vector birth rate

μ: Vector death rate

Outlook

- ▶ Serological survey
- ▶ Identity by molecular analysis
- ▶ Experimental infection in laboratory



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