

# **Middle Eastern Biology of Parasitism 2017**

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# Lebanon





**AUB** American  
University  
of Beirut  
الجامعة الأميركية في بيروت

WE MAKE HISTORY | 1866-2016  
**AUB**  
**150**





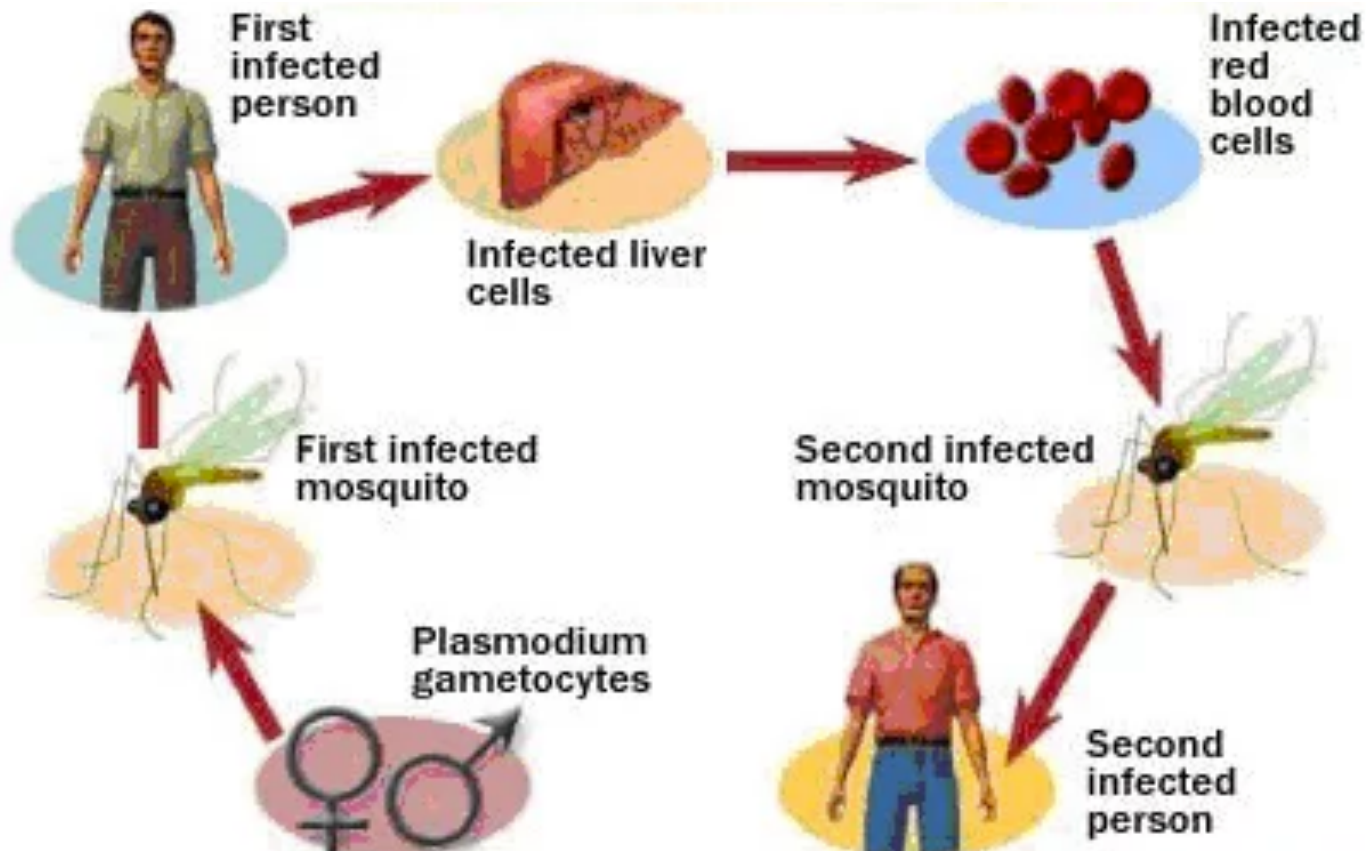
# Vector Biology Lab

## Dr. Mike Osta

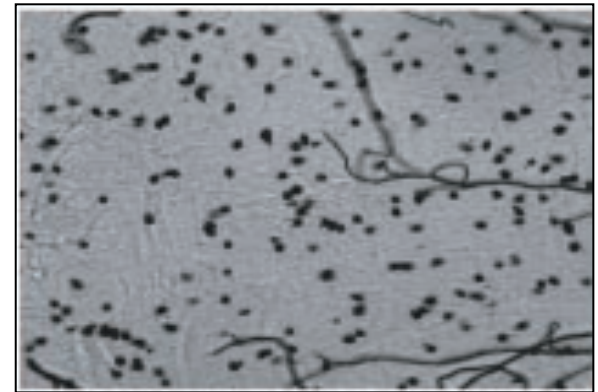
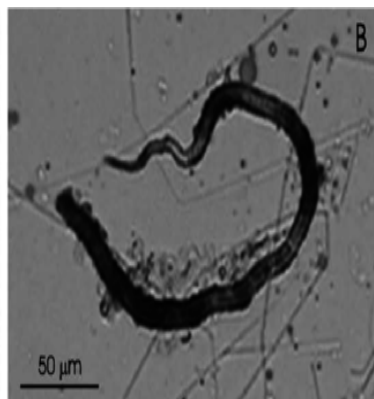
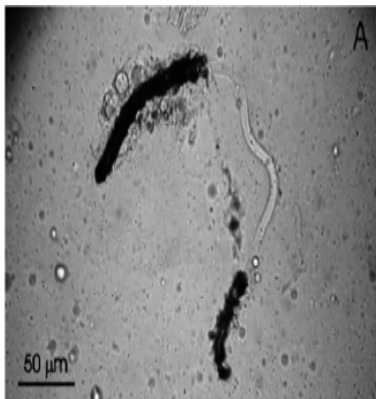
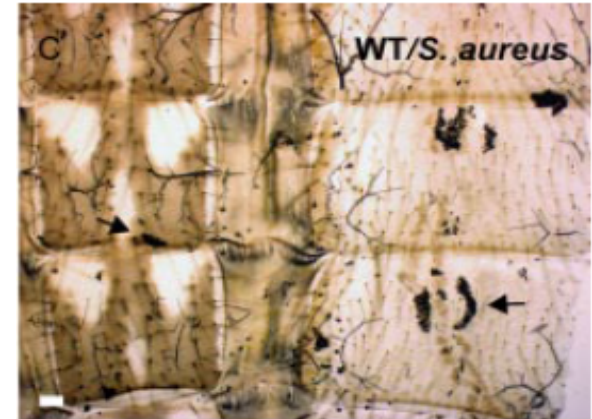
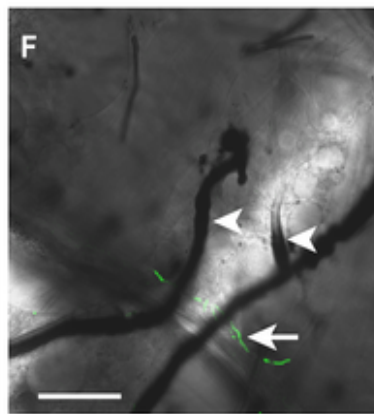
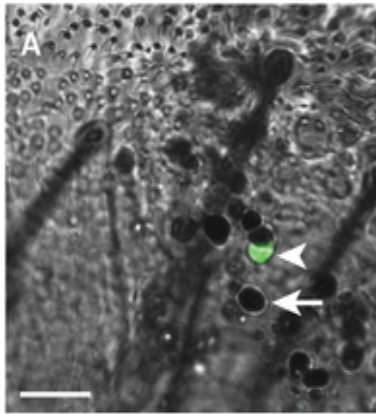




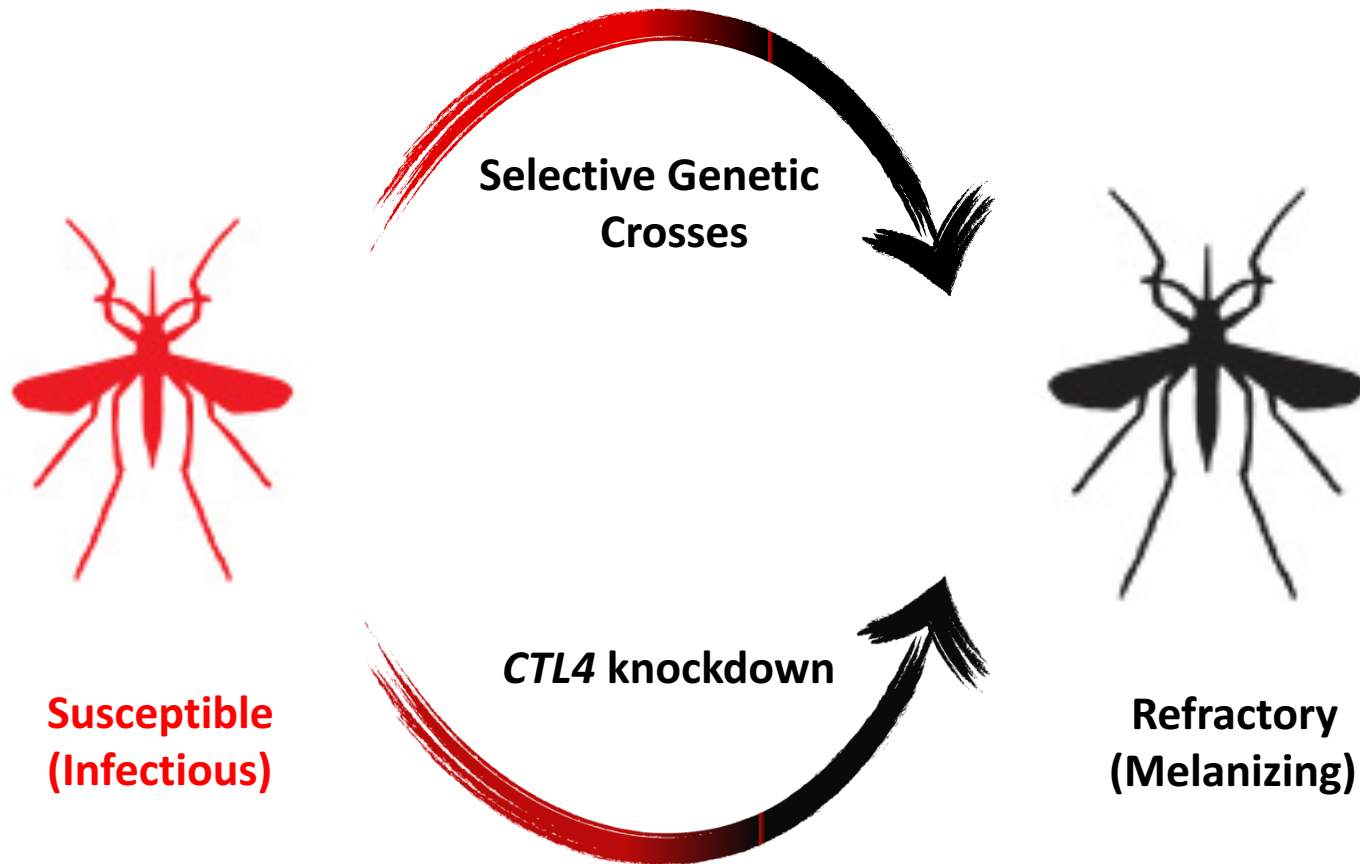
# Malaria Transmission Cycle



# Melanization

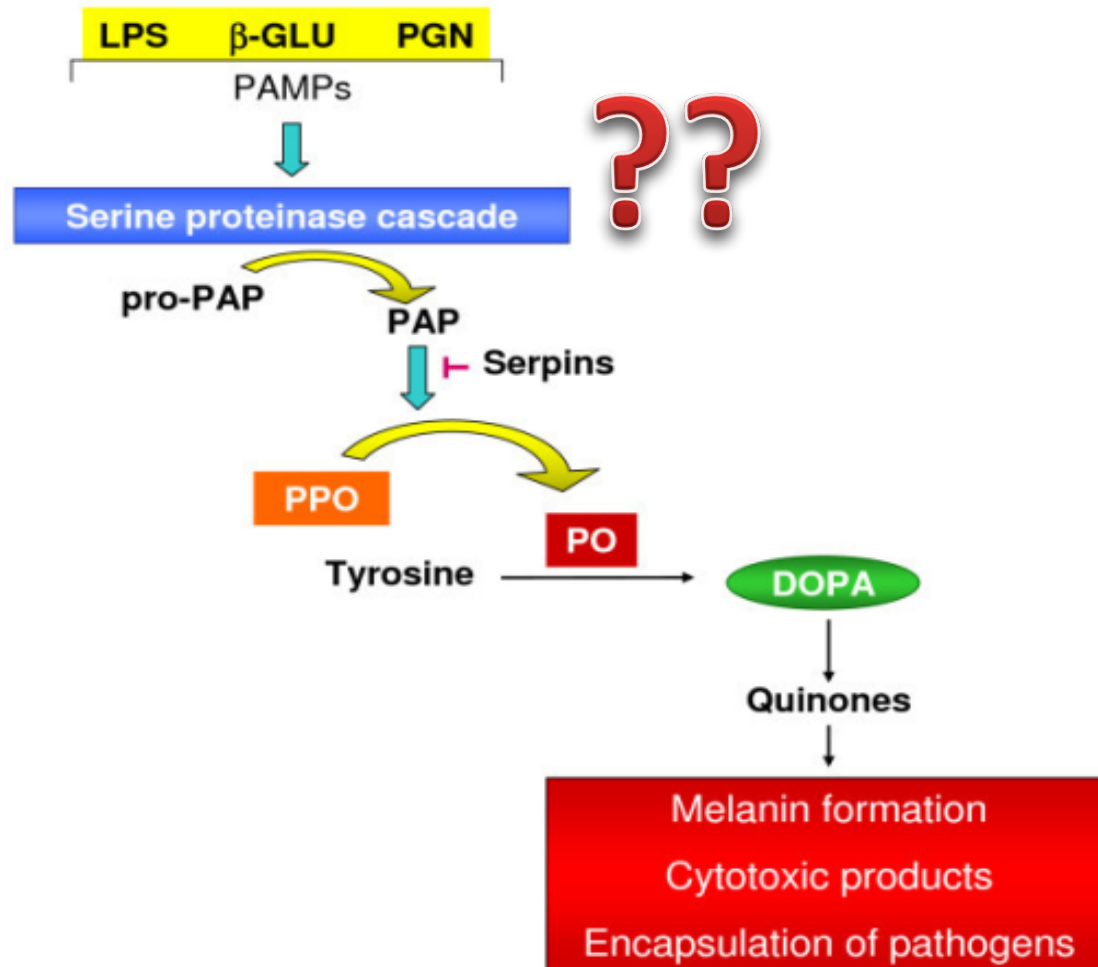


# Melanization





# Melanization Cascade



# Serine Protease Homologue : CLIPA16

- **Novel CLIP-SPH (AGA10730): CLIPA16**

## ➤ **Aim 1:**

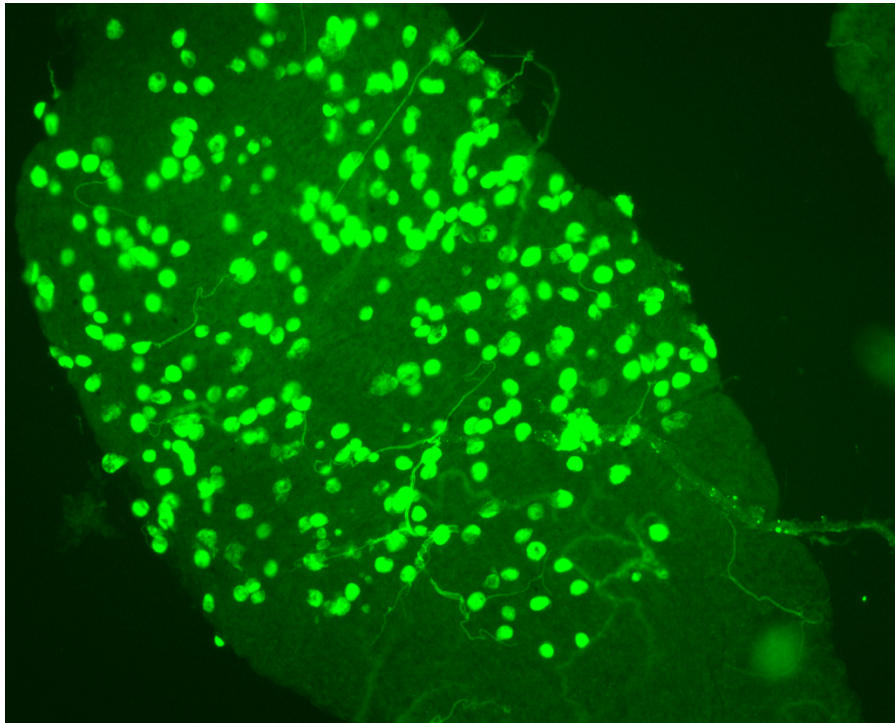
Functional genetic analysis of CLIPA16 in mosquito immunity

## ➤ **Aim 2:**

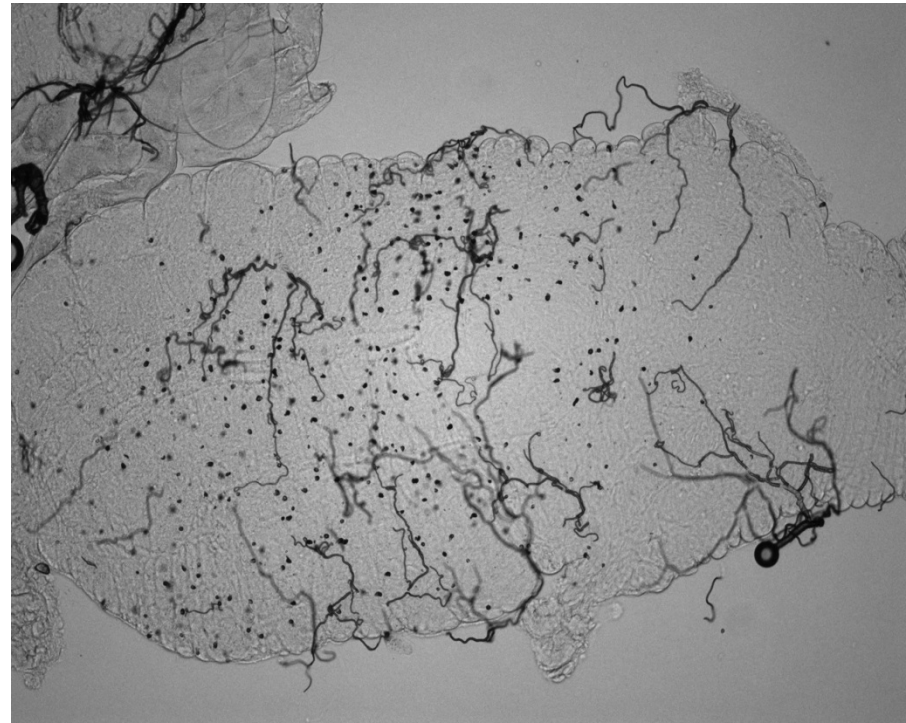
Molecular characterization of CLIPA16

# CLIPA16 is Required for Parasite Melanization

**GFP-expressing Ookinetes**

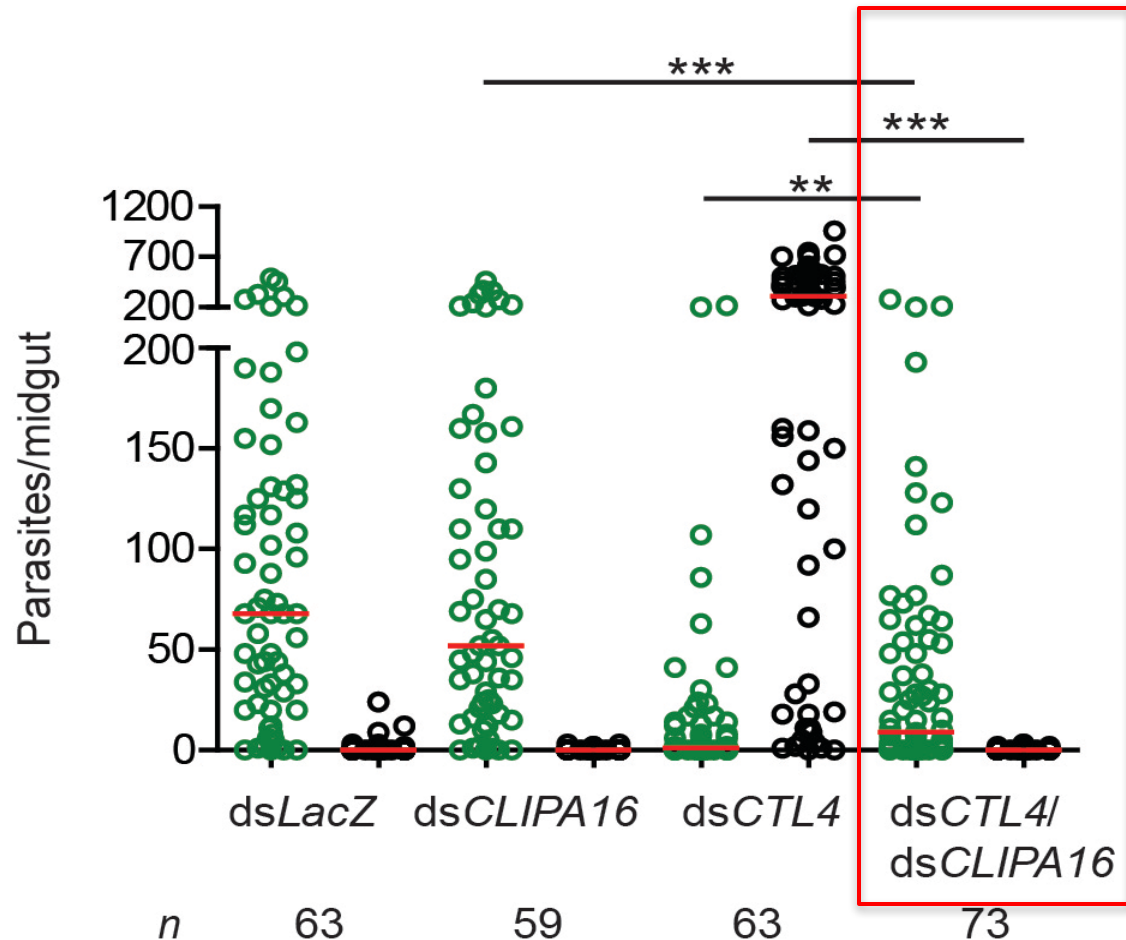


**Melanized Ookinetes**

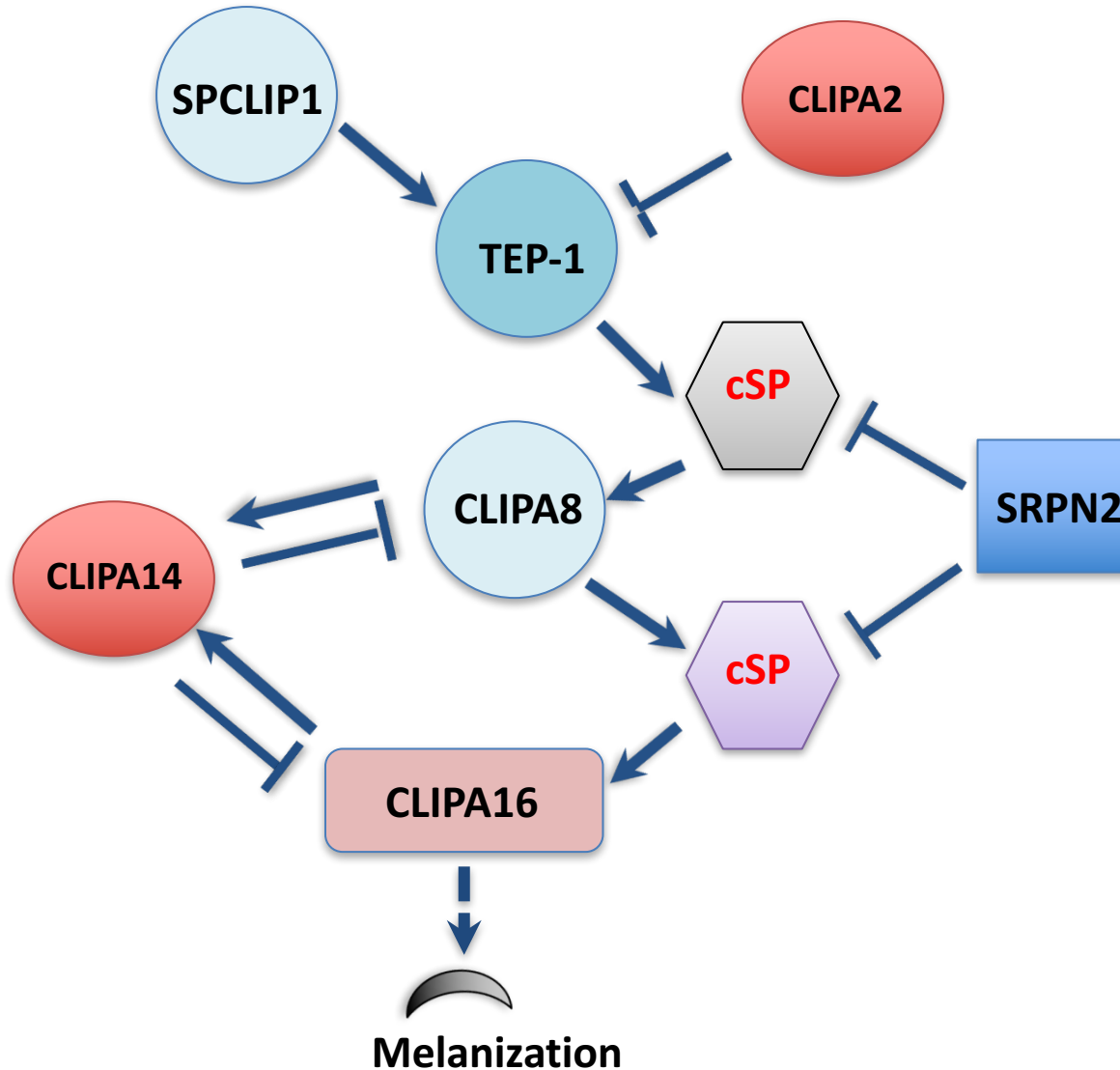




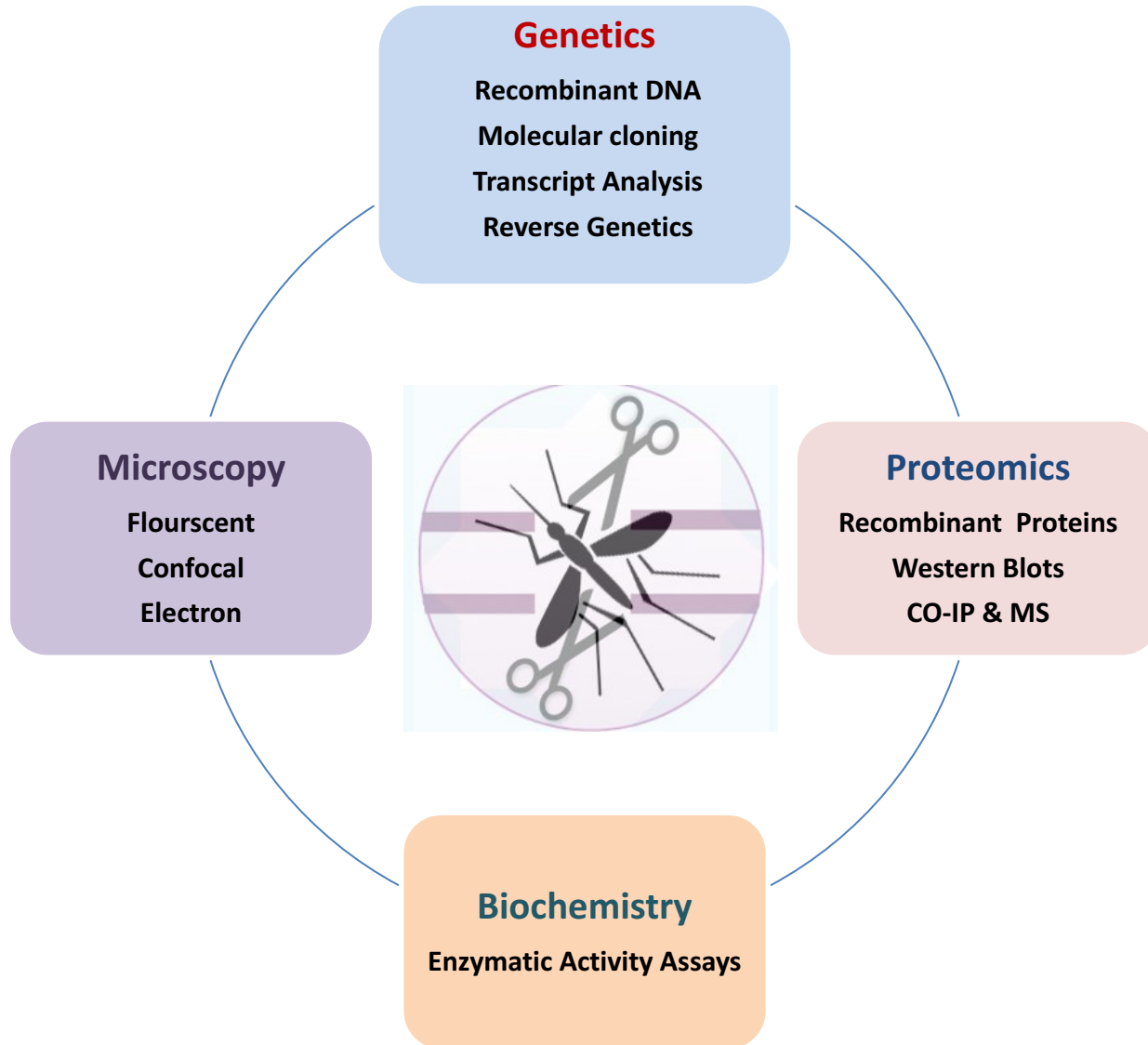
# CLIPA16 is Required for Parasite Melanization



# CLIPA16 Regulatory Cascade



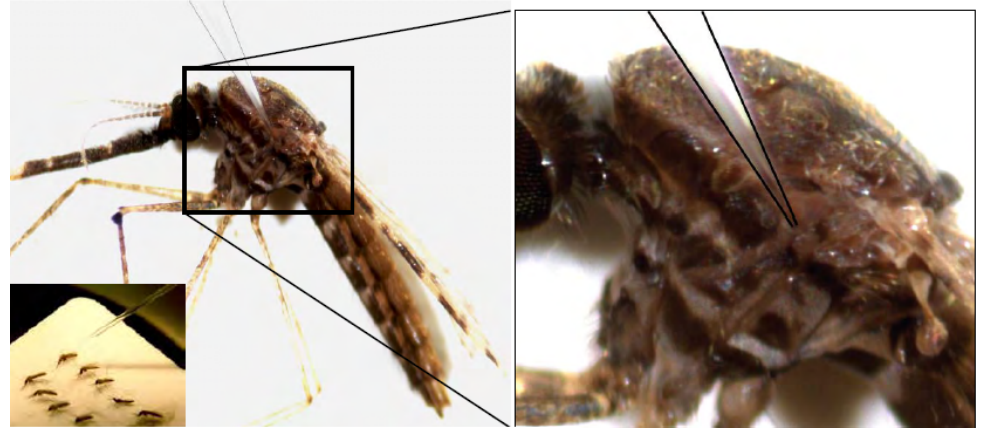
# Mosquito Micromanipulation



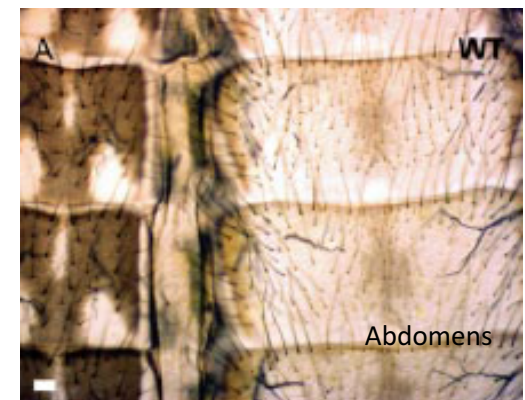
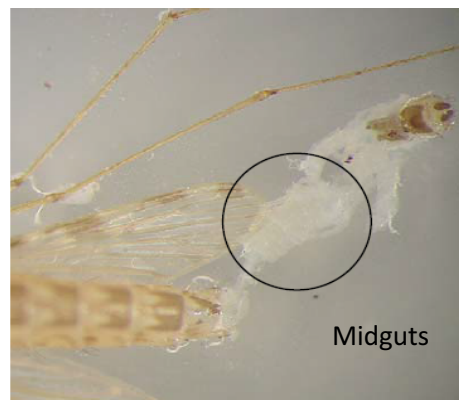


# Mosquito Micromanipulation & Dissection

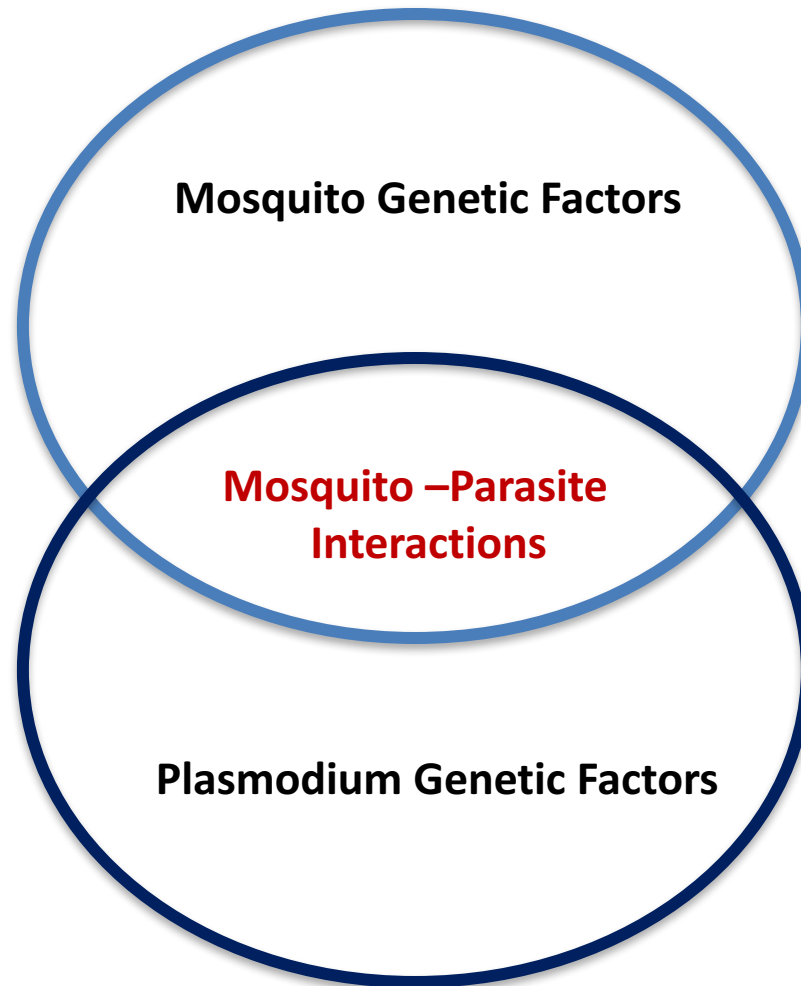
## Microinjection



## Microdissection



# Mosquito-Parasite Interactions



# Research Difficulties

- Insufficient Funding
- Importation Difficulties
- Lack of Communication



