

Research team Prof. Roger Huybrechts: Insect physiology and molecular ethology



Our Lab:



- Prof. Roger Huybrechts
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- 1 predoctoral student : Muuhammed Aslam (Pakistan)
- 1 master student : Vu Thi Thu Huong (Vietnam)

Localisation of the allatotropin receptor and the allatotropin ligand in the honeybee

- *Manduca sexta* (tabaco hornworm) and *Tribolium castaneum* (red flour beetle) : orexin like receptor → allatotropin receptor
- **Allatotropine**
main function : stimulation **Juvenile hormone** production
- **Honey bee** : also orexin like receptor predicted
→ binds also to allatotropin?
 - Localize site of synthesis receptor + ligand:
 - Q-RT-PCR
 - **In situ-hybridisation** (whole mounts)



Innate immunity in the locust, *Locusta migratoria*

- *Locusta migratoria* immunity :
 - **phagocytosis bacteria**
→ cellular innate immunity evident BUT **no opsonins** are identified
 - **humoral innate immune system?**
 - Master thesis:
 - **Hemomucin** → strictosidine synthase domain
 - **angiotensin converting enzyme (ACE)**
→ role in cell recruitment and cytokine storm ?
 - antibacterial and antifungal peptides?
→ EST database
- } => Q-RT-PCR + RNA interference

