

## SEMINAIRE INTERNE :

Le **Mercredi 12 juin**, **David DAVTIAN** (Etudiant M2, Equipe Ecosystèmes et Immunité, Département de Biologie Médicale), nous présentera à **11h** en salle de réunion du CSM (2ème étage) un séminaire intitulé :

### ***Analyse par approche bio-informatique du transcriptome d'*Aiptasia pallida* obtenu après infection par *Vibrio parahaemolyticus****

The emergence of new pathogenic bacterial strains, especially those developing resistance to antibiotics, is a major global health issue. That is why a lot of recent studies try to understand the complex interactions between virulence factors and mechanisms of immune defense in order to develop better methods to protect ourselves and slow down the apparition of those type of pathogens. During my internship and this study, we focused on the innate immune response of a sea anemone model system, *Aiptasia pallida*, in condition of infection with *Vibrio parahaemolyticus*, a marine bacteria able to infect marine invertebrates and cause gastroenterities in humans. The goal of this study was to use next generation sequencing technologies to analyse and explore the transcriptome of *Aiptasia* during the infection in order to gain a better understanding of the innate immunity processes in place. We used Illumina sequencing and bioinformatics tools such as Trinity, R, HMMER and OmicsBox, to perform these tasks. In the end, gene expression analyses detected thousands of genes responsive to the infection over twelve hours. The functional analyses confirmed the involvement of a large and diverse cnidarian immune gene repertoire in response to pathogen invasion. Well established immunity- associated genes such as members of the TLR, TNFR, NLR families were detected as significantly expressed, which allowed for educated hypotheses towards their roles in the response to *Vibrio*. This study highlights an ancestral origin and the functional conservation of certain genes previously thought specific to higher metazoans. It also leads to many hypotheses that need to be further explored.