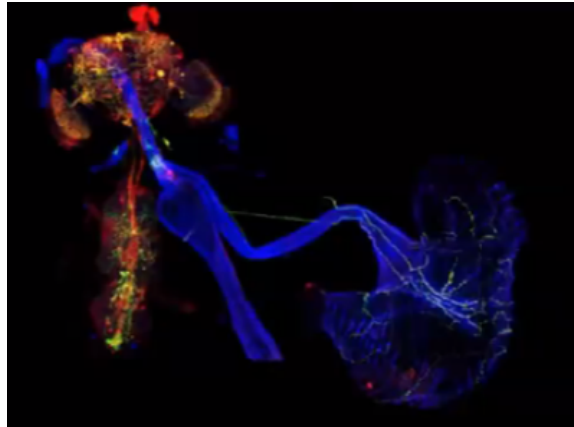




External seminars – Dafni Hadjieconomou (GutSenseLab, Paris Brain institute)



Laboratory of the speaker

Paris Brain Institute

Invited by

Zayna Chaker

Date

September 4th

Titre de la présentation/Title of the presentation

"Mind the gut": inter-organ communication shaped by sex-specific functions of enteric neurons

Résumé/Short abstract

A series of tightly controlled processes ensure that energy is either stored or consumed within an organism. This control is central to survival and prosperity of the animal, yet we only partly understand it. Communication between the brain and the gut, the so called "brain-gut axis", has emerged as a key player in regulating aspects of animal physiology by directly affecting energy stores. Nevertheless, due to the astonishing anatomical complexity of the underlying neural circuits in mammals, an in depth understanding of the cellular and molecular mechanisms controlling this axis is still lacking. Using the simpler, yet functionally comparable *Drosophila melanogaster* brain-gut axis as a model system, provides an entry point to tackling this problem. My team investigates the long-standing question on how environmental factors, such as lifestyle habits, impact animal physiology. This question is also relevant to developmental biology especially in line with the concept that the field extends to organ remodelling in the adult as exemplified in the case of the gut and its associated neurons

Mini-CV/Short CV (+ Picture of you)



I am originally Greek Cypriot. I grew up on both in Greece and Cyprus. I have always been interested in discovery: when I was a child, I wanted to be an archeologist.

When I grew up, I started to get interested in **biology** and **genetics**. There was no research degree in this field in Greece, so I prepared to attend a university in the United States. But the year when I was taking my final exams at the end of school, such a degree was created. So, I stayed in Greece to undertake a bachelor's degree in

molecular biology and genetics. In the final year of this degree, I got hooked on neuroscience. It was super interesting to learn more about this black box that is the brain. I then moved to London to do a master's degree in **clinical neuroscience**. For my PhD, I chose **developmental biology**, with a focus on the nervous system, using flies. I got hooked on flies and flies' genetics too; then by the end of my doctorate years I became more interested in the functioning nervous system within an adult animal and its role in regulating physiology. I moved to a lab at Imperial College London to study the enteric nervous system: the part of the nervous system that is innervating our gut. It is a fascinating topic.

Towards the end of my post-doc, I applied to the call for team leader positions at **Paris Brain Institute**, and I'm very happy to be here now.