UNIVERSITÀ DEGLI STUDI DI TORINO

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TIC56_DIP_BIOS

Visiting Professor Program
Academic year 2021/2022

DEPARTMENT OF LIFE SCIENCES AND SYSTEMS BIOLOGY

TEACHING COMMITMENT: 18 hours

COURSE TITLE

Development of the GnRH system from animal models to humans

TEACHING PERIOD

2nd term

SCIENTIFIC AREA

Developmental Biology

LANGUAGE USED TO TEACH

English

The Degree Course is entirely taught in English

COURSE SUMMARY

Reproduction in mammals is under the control of a small population of hypothalamic neurons, named Gonadotropin Releasing Hormone Neurons (GnRH), which regulate the gonadotrophin release from the pituitary, which in turn are responsible for the correct maturation and function of the gonads.

These neurons represent a great model to address key questions of Developmental Biology related to processes leading to cell-specification, cell migration, axonal elongation and integration into a fully-operating and functional neuronal network. The objective of the course will be to give an overview on the progress made during the last 25 years of research dissecting GnRH development, in rodents and humans, the full repertoire of molecular cues regulating their migratory process and the precise targeting of these cells to the hypothalamus.

LEARNING OBJECTIVES

The goal of this module is to teach and train master students in the latest developments in the field of developmental neurobiology through direct and active interaction with an internationally recognized expert in the field. Through the analysis of the most recent literature and active discussion, the students will develop critical thinking and knowledge on the cellular/molecular mechanisms underlying normal development, function and dysfunction of the nervous system. Students will learn from an experienced researcher how to address problems and formulate research questions. They will also acquire in-depth knowledge of the novel, cutting-edge approaches and technologies that can be applied synergistically to study any cell-tissue system development.

TUTORSHIP ACTIVITIES

N/A

LAB ACTIVITIES

10 hr will be dedicated to education in small group supervised by the teacher to foster a deep understanding of the topics presented during the course. Students will be required to present focused scientific papers on the subject and discuss them and/or to develop a small research projects on specific aspects. These activities will be designed in order to promote the active participation of each student.

OTHER ACTIVITIES BESIDES THE COURSE

The visiting Professor will be invited to give a Lecture in the cycle organized by the PhD School in Neuroscience (open to a wide audience of PhD students and fellows) and to meet the PhD students interested in discussing their projects.

VISITING PROFESSOR PROFILE

The Visiting Professor should be an internationally recognized specialist in the field of neural development, with a documented track-record in brain development, plasticity and disease. She/he should have experience in teaching, in particular in the relevant area of neural development at the level of advanced master and/or early PhD students. We seek someone with deep experience in the neural development research field and particularly in the development of the GnRH system.

CONTACT PERSON AT THE DEPARTMENT

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