

GABBA

Graduate Program in Areas of Basic and Applied Biology

Universidade do Porto

Neuroscience Module

- Introduction to Neuroscience –

Organizers

Albino J. Oliveira-Maia

Rui M. Costa

Dates and Venue

June 24th to June 28th 2013

Champalimaud Centre for the Unknown

Lisbon, Portugal

Goals

The study of neuroscience has become truly multidisciplinary in recent years, integrating a considerable array of technologies and approaches into a science aimed at understanding how the brain comes to perceive, acquire and use information. Although molecular, systems and cognitive neuroscience will continue to prosper on their own, there is a growing sense that integration of these fields is inevitable. Recently, powerful tools emerging from molecular genetics, electrophysiology and brain imaging have offered novel perspectives to the study of the brain, and their use has led to an unprecedented ability to both manipulate and observe brain phenomena, across levels of biological complexity. In this module, we will highlight recent findings that document this exciting convergence between molecular, cellular, systems and computational neuroscience, focusing on themes such as neuronal control of feeding and of sexual behavior, across different species.

Lecturers

Albino Oliveira-Maia; Champalimaud Neuroscience Program

<http://www.neuro.fchampalimaud.org/en/>

Carlos Ribeiro; Champalimaud Neuroscience Program

<http://www.neuro.fchampalimaud.org/en/>

Gordon Fishell, New York University School of Medicine

<http://www.med.nyu.edu/fishelllab/index.html>

Inbal Israely; Champalimaud Neuroscience Program

<http://www.neuro.fchampalimaud.org/en/>

Leopoldo Petreanu

<http://www.neuro.fchampalimaud.org/en/>

Maria Luisa Vascocelos

<http://www.neuro.fchampalimaud.org/en/>

Marta Moita; Champalimaud Neuroscience Program

<http://www.neuro.fchampalimaud.org/en/>

Rui Costa; Champalimaud Neuroscience Program

<http://www.neuro.fchampalimaud.org/en/>

Susana Lima; Champalimaud Neuroscience Program

<http://www.neuro.fchampalimaud.org/en/>

Schedule

The Module will consist of lectures and workshops or demonstrations, held in the morning and early afternoon. From Tuesday to Friday, at the start of each day the students (in groups of 3) are expected to present an overview of the material covered on the previous day. This should be a 45 minute presentation followed by 15 minutes of discussion and questions. Evaluation for this course will depend on this presentation.

Monday	24.06	Tuesday	25.06	Wednesday	26.06	Thursday	27.06	Friday	28.06
		9.00-10.00 Group 1 Overview day 1		10.00-11.00 Group 2 Overview day 2		9.00-10.00 Group 3 Overview day 3		9.00-10.00 Group 4 Overview day 4	
10.00-12.00 AOM Welcome and introduction		10.15-12.15 II Synaptic and structural plasticity		11.15-12.45 MLV Innate behaviour		10.15 -11.45 CR The molecular and neuronal basis for nutrient decisions 12.00-13.00 GF (CNP Col.) The role of genetic programs and activity in the development of interneuron diversity		10.15-12.15 LP Cortical circuits	
LUNCH									
14.00-16.00 MM Neurobiology of learning and memory		14.00-16.00 RC Neurobiology of action		14.00 -16.00 SL Neuroethology		14.30-16.30 AOM Hedonism vs. homeostasis in feeding regulation		14.00-17.00 Workshop Advanced electrode technology	
		20.00 Dinner						18.00 CNP Beer Hour	

AOM – Albino Oliveira-Maia;
 CR – Carlos Ribeiro;
 GF – Gordon Fishell;
 II – Inbal Israely;
 LP – Leopoldo Petreanu;
 MLV – Maria Luisa Vasconcelos
 MM - Marta Moita;
 RC - Rui Costa;
 SL - Susana Lima.