

# **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 2<sup>nd</sup> to June 6<sup>th</sup> 2014

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.

## **Lecturers**

Albino Oliveira-Maia; Champalimaud Neuroscience Programme and Neuropsychiatry Unit

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

<http://centroclinico.fchampalimaud.org/en/neuropsiquiatria/>

Bernardo Barahona-Corrêa; Champalimaud Neuropsychiatry Unit and Faculdade de Ciências Médicas da Universidade Nova de Lisboa

<http://centroclinico.fchampalimaud.org/en/neuropsiquiatria/>

Carlos Ribeiro; Champalimaud Neuroscience Programme

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

Eugenia Chiappe; Champalimaud Neuroscience Programme

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

Maria Luisa Vasconcelos; Champalimaud Neuroscience Programme

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Marta Moita; Champalimaud Neuroscience Programme

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

Rui Costa; Champalimaud Neuroscience Programme

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

Susana Lima; Champalimaud Neuroscience Programme

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

Tiago Maia; Faculdade de Medicina da Universidade de Lisboa, Instituto de Medicina Molecular and Columbia University

[http://childpsych.columbia.edu/brainimaging/CV\\_maia.html](http://childpsych.columbia.edu/brainimaging/CV_maia.html)

## **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 2 or 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	02.06	Tuesday	03.06	Wednesday	04.06	Thursday	05.06	Friday	06.06
9:30-10:00 Registration		9:30-10:30 Group 1 Overview day 1	9:00-10:00 Group 1 Overview day 1	9:00-10:00 Group 2 Overview day 2	9:00-10:00 Group 2 Overview day 2	9:00-10:00 Group 3 Overview day 3	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		10:30-12:30 BBC Neuropsychiatry and non- invasive brain stimulation	10:00-12:00 BBC Neuropsychiatry and non- invasive brain stimulation	10:00-12:00 LV Innate Behaviour	10:00-12:00 LV Innate Behaviour	10:00 -12:00 CR The molecular and neuronal basis for nutrient decisions	10:00 -12:00 CR The molecular and neuronal basis for nutrient decisions	10:00-12:00 EC Sensorimotor integration	
LUNCH									
14:00-16:00 SL Optogenetics and other novel approaches to the study of Neuroscience		14:30-16:30 TM Brain imaging and computational modeling in the study of psychiatric disorders	14:30-16:30 TM Brain imaging and computational modeling in the study of psychiatric disorders	14:00 -16:00 RC Neurobiology of action	14:00 -16:00 RC Neurobiology of action	14:00-16:00 AOM Hedonism vs. homeostasis in feeding regulation	14:00-16:00 AOM Hedonism vs. homeostasis in feeding regulation	14:00-16:00 MM Social transmission of fear	
20:00 Dinner								18:00 CNP Beer Hour	

AOM – Albino Oliveira-Maia;  
 BBC – Bernardo Barahona-Corrêa  
 CR – Carlos Ribeiro;  
 EC – Eugenia Chiappe;  
 MLV – Maria Luisa Vasconcelos;  
 MM - Marta Moita;  
 RC - Rui Costa;  
 SL - Susana Lima.  
 TM – Tiago Maia