Neurobiology and Disease
The Doctoral Programme in Health Sciences
Faculty of Medicine, University of Coimbra
(http://www.phdhs.org/)

Local: IBILI Auditorium (Pólo III – Pólo das Ciências da Saúde, Azinhaga de Santa Comba, Celas)

Date: 14-18 February, 2011

Organizers: Ana Cristina Carvalho Rego and Cláudia Maria Fragão Pereira
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Background and Goals:
Neurodegenerative disorders, namely amyloidogenic disorders such as Alzheimer’s disease and prion diseases, Parkinson’s disease and polyglutamine expansion diseases affect selective brain regions and are associated with the formation of insoluble protein aggregates. These disorders are also characterized by a gradual progression of symptoms that result in dementia and finally the death of the patients. However, the mechanisms by which altered proteins initiate the pathogenic processes linked to these diseases remains to be elucidated.

The PhD course on ‘Neurobiology and Disease’ is intended to promote the understanding of molecular, biochemical and cellular mechanisms operating in these devastating diseases, and will also cover novel detection methods and therapies that are under development.

Programme

Monday (Feb. 14)
9:30-10:00 Course introduction and student’s presentation
10:00-11:00 Alzheimer’s disease: hallmark changes, symptoms and earlier diagnosis (Agata Copani)
11:00-11:30 Break
11:30-12:30 Introduction to Parkinson’s disease molecular and cellular mechanisms (Sandra Cardoso)
12:30-14:00 Lunch
14:00-15:00 Introduction on Huntington’s disease, overview of the different mechanisms leading to neuronal toxicity (Sandrine Humbert)
15:00-15:30 Clinical features of Huntington’s disease (Cristina Januário)
15:30-15:45 Break
15:45-16:15 Clinical features of Parkinson’s disease (Cristina Januário)
16:15-16:45 Clinical features of Alzheimer’s disease (Isabel Santana)

Tuesday (Feb. 15)
9:30-10:15 Alzheimer’s disease: the search for causes (part I) (Agata Copani)
10:15-10:45 Break
10:45-11:30 Alzheimer’s disease: the search for causes (part II) (Agata Copani)
11:30-12:30 Translational research in Alzheimer’s disease (Catarina R. Oliveira)
12:30-14:00 Lunch
14:00-15:00 ER stress in Alzheimer’s disease (Cláudia Pereira)
15:00-15:30 Break
15:30-16:30 Excitotoxicity in Alzheimer’s disease (A. Cristina Rego)

Wednesday (Feb. 16)
9:30-10:30 Alzheimer’s disease: current treatments and future breakthroughs (Agata Copani)
10:30-11:00 Break
11:00-12:00 Alteration of the degradation processes (Sandrine Humbert)
12:00-14:00 Course lunch
Afternoon- Free time

Thursday (Feb. 17)
9:30-10:30 Molecular mechanisms of disease in hypoxic-ischemic brain injury (Armanda Santos)
10:30-11:00 Break
11:00-12:00 Antiphospholipid syndrome and vascular ischaemic diseases (Penka A. Atanassova)
12:00-14:00 Lunch
14:00-15:00 Huntington and the control of cellular dynamics (Frederic Saudou)
15:00-15:30 Break
15:30-16:30 Htt and neurogenesis in health and disease (Sandrine Humbert)

Friday (Feb. 18)
9:30-10:30 Student’s presentations (groups 1-2)
10:30-11:00 Break
11:00-12:30 Student’s presentations (groups 3-5)
12:30-14:00 Lunch
14:00-14:30 Written evaluation (questionnaire)
14:30-16:00 Free-time
16:00-17:00 Huntington’s disease: from axonal transport to ciliogenesis (Frederic Saudou)

Student’s assignments and distribution in Groups (24 students):

The students (Groups 1-5) will be asked to fully present an original paper and to critically analyze the data. Additional information will be considered for the evaluation. Each group will have 15 min for this presentation.

Group 1 – Ana Isabel Pina Rodrigues, Ana Isabel Plácido Fernandes, Diana Matias, Ana Sofia Primo dos Santos Cabral, Gisela Santos

Group 2 – Fernanda Maria da Conceição Correia Torcato Ferreira Carrilho, Filipa Carvalhal Marques, Inês Ferreira, Nuno Miguel Mendonça da Silva, Telma Santos

Group 3 – Joana Catarina Gonçalves Grácio, Germana Domingues, Ivan Salazar, João André Sargento Araújo de Freitas, Luana Carvalho Noia

Group 4 – João Manuel da Fonseca Gomes de Lemos, Maria João Ribeiro, Joana Santos, Palmira da Conceição Araújo Barreira da Silva, Sandro Gabriel Ferreira Dá Mesquita
The students will be evaluated based on the oral presentation and on the ability to establish an interactive participation along the course, namely by frequently questioning the lecturers.

The evaluation criteria (0-20) will include:
- Presence (0-2; 0 will be given to less than 50% attendance)
- Participation (0-3)
- Paper
  - Presentation (0-2)
  - Critical view of paper (0-4)
  - Extra information (0-3)
- Questionnaire (0-6)

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