



## **New Therapies and Technologies**

**March 11-15, 2013**

Regenerative Medicine can be defined as the enhancement or trigger of the natural tissue regeneration process to restore normal function. It refers to a group of biomedical approaches that include (stem) cell-based therapies, the administration of biologically active molecules, the implantation of in vitro grown tissues or different combinations of the former.

In this module the main components of this new therapeutic approach will be presented, as well as important supportive technologies that are being key for the quick progress that is being observed in the field.

Specific topics of the program include:

- Fundamentals of biomaterials science and engineering
- Stem Cells in Regenerative Biology and Medicine
- BioMaterial and scaffold design
- Tissue engineering
- Cell-material interactions
- Nanotechnology / Nanomedicine
- Bioimaging

### **Invited Speakers**

#### **Ana Paula Pêgo**

*INEB, NEWTherapies Group, Universidade do Porto, Portugal*

"Introduction to biomaterials and tissue engineering"

"Nanotechnology at the service of nerve regeneration"

#### **Bradley Nelson**

*Institute of Robotics and Intelligent Systems*

*ETH-Zürich, Switzerland*

"MicroRobotics and NanoMedicine"

#### **Helena Azevedo**

*3B's, Universidade do Minho, Portugal*

"Self-assembling approaches for fabricating biomaterials with complex hierarchical structure"

#### **João Cortez**

*INEB, Business Development & International Projects Officer, Universidade do Porto, Portugal*

"The right pitch for your project"

#### **Meriem Lamghari**

*INEB, NEWTherapies Group, Universidade do Porto, Portugal*

"The concept of neuro-osteogenesis and its relevance in bone biology"

**M<sup>a</sup> Cristina L Martins***INEB, NEWTherapies Group, Universidade do Porto, Portugal*

"Engineering surfaces to modulate biological responses"

**Mário Barbosa***INEB, NEWTherapies Group, Universidade do Porto, Portugal*

"Modulation of cell-biomaterial interactions for tissue regeneration"

**Paulo Bártolo***Centre for Rapid and Sustainable Product Development (CDRSP), Polytechnic Institute of Leiria (IPL), Portugal*

"Biofabrication"

**Pedro Granja***INEB, NEWTherapies Group, Universidade do Porto, Portugal*

"Biofunctional hydrogels for cell entrapment and delivery"

**Perpétua do Ó***INEB, NEWTherapies Group, Universidade do Porto, Portugal*

"Are Stem Cells the Holy Grail in Regenerative Medicine? - Forward-Looking Applications"

**Manela Brás, Maria Lázaro, Ricardo Vidal and Susana Carrilho***INEB, Universidade do Porto, Portugal*

Visits to INEB

**PROGRAM**

11 March	12 March	13 March	14 March	15 March
9:00-9:15 <b>Welcome</b>	9:00-10:30			
9:15-10:45 <b>Ana Paula Pêgo</b> (Aud B) <i>Break</i>	<b>Pedro Granja</b> (Aud B) <i>Break</i>	11:00-12:30	<b>PROJECT</b> (Aud C)	<b>PROJECT</b> (Aud C)
11:00-12:30 <b>Perpétua Pinto do Ó</b> (Aud B)	10:45-12:15 <b>Meriem Lamghari</b> (Aud B)	<b>Visit to b.IMAGE</b>		
14:00-15:30 <b>Helena Azevedo</b> (Aud B) <i>Break</i>	14:00-15:30 <b>Paulo Bártolo</b> (Aud A) <i>Break</i>	15:15 -16:45 <b>Mário Barbosa</b> (Aud B) <i>Break</i>	14:00-15:30 <b>Cristina Martins</b> (Aud C) <i>Break</i>	<b>PROJECT PRESENTATION</b> (Aud C)
15:45-17:15 <b>Ana Paula Pêgo</b> (Aud B)	15:45-17:15 <b>João Cortez</b> (Aud A)	17:00-18:30 <b>Bradley Nelson</b> (Aud A)	16:00-17:30 <b>Visit to SUIM</b>	

Lectures will take place at the Associate Laboratory Auditoriums (Auditorium A, B or C according to the program)