INTRODUCTION TO CELL CULTURE TECHNIQUES FOR REGENERATIVE THERAPIES



This course will cover the principles of cell culture theory for tissue engineering and regenerative medicine, with strong emphasis in state-of-the-art techniques for cell-identification and cellular properties analysis. Focus will be on stem cells (pluripotent embryonic stem cells, and multipotent stem cells, namely mesenchymal stem/stromal cells), endothelial and immune (myeloid and lymphoid) cells.

TOPICS

- basic cell culture techniques (isolation, maintenance, manipulation of cells);
- advanced cell culture (stem cell culture and differentiation; genetic modificaion of ES cells; 2D vs. 3D culture systems; bioreactors: experimental design and set up);
- readout methodologies for cell characterization (ELISA; immunocytochemistry, fluorescence imaging, flow cytometry);
- introduction to the requirements for translation of cell-based products to the clinic (illustrated at an industrial set up).

INVITED SPEAKERS:

Prof. Arti Ahluwalia (University of Pisa, Italy); Prof. Raquel Soares (Faculdade de Medicina da Universidade do Porto, Portugal); Research Scientist from the Industry: Dr Miguel Santos (ECBio, R&D in Biotechnology, S. A.)

REGISTRATION:

The course will be open to up to 15 students. For registration please contact gabriela.afonso@ineb.up.pt until January 28 of 2013. A 100€ fee will cover support course material and lunch. A Certificate of Attendance is issued upon completion of the course.

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