

PhD Position Available in BioPolySurf Marie Curie Research Training Network

A PhD position is available in the Biomaterials and Biomechanics Research Group of the Biomedical Engineering Research Centre (CREB) of the Universitat Politècnica de Catalunya (Barcelona, Spain). CREB is an interdisciplinary research centre with the aim of covering the demand for R&D in the field of biomedical engineering. The CREB has a team of highly qualified researchers with proven professional experience. It carries out important basic and applied research work and technology transfer aimed at sector involved in biomedical innovation, such as the business and hospital sectors, acting as an instrument in activating the science, technological and business sectors. The Biomaterials and Biomechanics Research has an extensive experience in the development of novel biomaterials and the use of biomaterials in tissue engineering.

A short description of the position is given below.

PhD: Properties of biological entities onto biomaterials

The aim of the project is to characterise the properties of different biological entities when they interact on the surface of the synthetic biomaterials. Among others, the kinetics and competition of the adsorption of proteins on biomaterials, the mechanical properties of the protein-adlayers formed, their evolution during time of exposition, their structure, the mechanical properties of a single cell or a layer of bone-forming cells, etc. will be the aim of this study.

The synthetic substrates studied will be a series of those developed at the biomaterials and biomechanics group for bone regeneration, such as metals, ceramics, and/or composites.

The influence of the physicochemical and topographical properties of these synthetic biomaterials on the interactions and properties of the biological entities will also be studied.

Advanced characterization techniques will be used, e.g. quartz crystal microbalance with monitoring of dissipation, nanoindentation, scanning probe microscopies, time-of-flight secondary ion mass spectroscopy, etc.

The ideal candidate should preferably be a **physicist, phisico-chemist or bioengineer**.

Candidates should sign the contract immediately after selection procedure (circa March 2006)

Candidates should be eligible according with the requisites set by the EU for Marie Curie Research Training Networks (http://europa.eu.int/comm/research/fp6/mariecurie-actions/action/stage_en.html).

Useful information at: BioPolySurf-RTN webpage (<http://www.biopolysurf.net>)
CREB webpage (<http://www.creb.upc.es>)

Applicants should send a CV with a letter of interest not latter than February the 24th, 2006 to:

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