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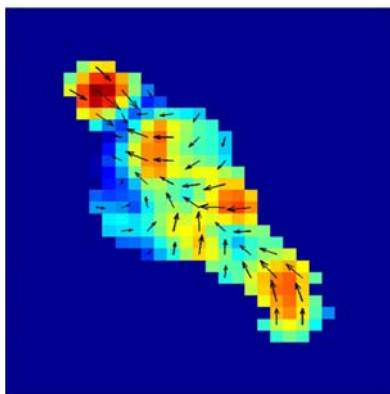
July 14, 2008

POSTDOC POSITION IN CELL MECHANICS

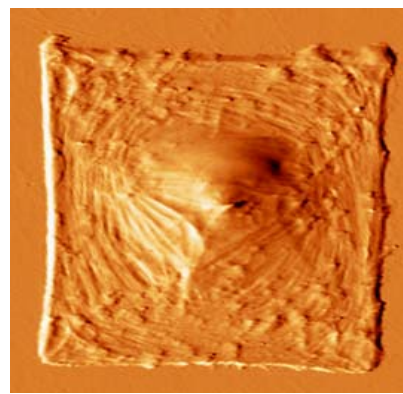
Regenerative medicine is of high scientific and clinical relevance to pneumology because prevalent lung diseases are characterized by pulmonary tissue injury and repair. A major open question is to understand the process of stem cell differentiation onto lung epithelium phenotypes. Recent data suggest that both the mechanical properties of the cell microenvironment and the mechanical stimuli experienced by the cell play a key role in stem cell differentiation. Mechanical signaling is expected to regulate stem cell fate in the lung given that this organ is subjected to mechanical stress during breathing. This postdoc project is aimed at investigating the mechanisms regulating stem cell differentiation onto alveolar epithelial phenotype by mechanical stimuli. The lab is equipped with a wide variety of powerful cell mechanics techniques including atomic force microscopy, magnetic tweezers, optical tweezers, micro/nanopatterning and advanced live-cell imaging.

This is a 2-year postdoctoral position with a gross salary of about 25,000 €/year. The contract is financed by the Networking Biomedical Research Center on Respiratory Diseases (CIBERES).

Candidates are expected to have a sound background in nanotechnology, physics/biophysics or bioengineering. Candidates are invited to send a CV, a cover letter describing previous work and motivation, and names and e-mail addresses of 2-3 referees to Prof. Ramon Farré (rfarre@ub.edu).



Mapping cell contraction by traction microscopy
Gavara et al Biophys J 2008



Regulating cell shape by micropatterning
Roca-Cusachs et al Biophys J 2008