



PhD Program between the Freie Universität Berlin (FUB) and the China Scholarship Council (CSC)

Open PhD position for CSC scholarship candidates 2015

The PhD position is only offered to Chinese PhD candidates for application in the framework of the FU-CSC Program.

<u>Department/Institute:</u>	Institute of Chemistry and Biochemistry
<u>Subject area:</u>	Regenerative Medicine
<u>Name of Supervisor:</u>	Prof. Nan Ma
<u>Number of open positions:</u>	3
<u>Project title:</u>	Stem cell and material interaction

Project description:

Stem cells could sense the physical signals of extracellular matrix and respond to those signals with alternated cell function. Various physical properties of materials were shown to dictate stem cell function. The mechanism how physical cues are translated into biochemical signals still unclear. In the proposed project, we will examine various physical signals from materials and their influence on (stem) cell behavior. Here we asked whether particular signaling pathways play a mechano-regulatory role by translating micro environmental inputs into biochemical signals that might regulate stem cell self-renewal and differentiation. We would like to address whether the biophysical factors could help reprogram somatic cells into specific cell types (neuron or cardiomyocyte). Learning how stem cells exploit the physical signal to self-regulate their differentiation path is crucial to stimulate new ideas how to exploit stem cells for therapeutic purposes, or for the design of advanced biomimetic scaffolds for tissue engineering applications.

Language requirements:

English

Academic requirements:

Major in biology, biochemistry, bioengineering, or cell biology, or biomaterial science

Link to professor and further information:

<http://www.geisteswissenschaften.fu-berlin.de/we08/institut/mitarbeiter/profsiebenhaar/index.html>

Please note:

In a first step the complete application should submit to the Beijing Office for evaluation by January 4th. Please don't contact the professor before. He will get in contact with you after having received the complete application in January.