

PhD Student (project 4)

Biologist/Chemist

Uniklinik RWTH Aachen

The position is part of the EU-funded Marie Skłodowska-Curie Innovative Training Network InCeM (Integrated Component Cycling in Epithelial Cell Motility). InCeM focuses on cell migration, which is essential for vital processes such as tissue formation, wound healing and tissue invasion during carcinogenesis. It aims to visualise morphological, biochemical and physical processes of cell motility to integrate these data into multi-scale models with the goal to deliberately tune motile behaviour in relation to disease. InCeM provides an international and highly interdisciplinary framework of collaborators from academia and industry with core expertise in medicine, biology, biochemistry, image analysis, modelling and engineering.

The topic of the subproject, which will be carried out at Uniklinik RWTH Aachen Institute of Molecular and Cellular Anatomy, is „Impact of keratin network regulation on migrating cells“. The epithelial cytoskeleton consists of keratin intermediate filaments together with actin filaments and microtubules, which form an integrated network whose dynamic organization is regulated by the extracellular matrix and adjacent cells through distinct adhesion sites. The project will employ printing techniques to systematically examine the effects of these adhesions and their related signalling mechanisms on cytoskeletal dynamics. Using novel image analysis tools comprehensive mathematical models will be developed in the partner laboratories of InCeM to predict migratory behaviour.

We are looking for a candidate with experience in molecular biology, microscopy techniques and functional assays. The candidate should have a strong background in cell biology and biophysics. We are looking for a motivated individual to pursue the highly interactive project toward a PhD degree.

Applications are invited for PhD student fellowships to start in spring/early summer 2015. The fellows should not have resided or carried out their main activity (work, studies, etc.) in the country of the host partner for more than 12 months in the 3 years immediately prior to the reference date.

Salary details see incem.rwth-aachen.de/salary.html.

Application deadline: Applications should be submitted immediately but no later than the end of March to be considered and should be submitted using the [application form](#) on the InCeM-website.

For further enquiries concerning project details contact:

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