PhD in Biomechanics of cancer cell extravasation

Institute for Biological Interfaces I (IBG-I)

Karlsruhe Institute for Technology (KIT)

Tumor cell extravasation through the walls of blood vessels is a crucial step during tumor metastasis. The goal of the project is to study the role of integrin clustering on the adhesion and transmigration steps of the extravasation of metastatic cells, with special focus on biomechanical aspects. By harnessing the capabilities of DNA origami nanostructures to present ligands to cells with a full control of their stoichiometry and nanoscale orientation, the project aims to elucidate the receptor geometries that promote cell extravasation during the metastatic process.

We are seeking a highly motivated PhD candidate to work in the fields of biophysics, DNA origami nanostructures, cell biology and microfluidics. The PhD candidate will have access to latest state-of-the-art equipment in a highly multidisciplinary and stimulating research environment.

Requirements

- Master Degree in Biophysics, Bioengineering, Biochemistry or Biology
- Hands-on experience and knowledge in force spectroscopy and/or atomic force microscopy will be greatly appreciated. Expertise in eukaryotic cell biology is beneficial.
- Good command of the English language

Application procedure

Candidates should submit a CV, cover letter and the names and contact details of at least two references by e-mail to carmen.dominguez@kit.edu.

References
