Post-Doc Position in Protein Nanopatterning available at the Interdisciplinary Nanoscience Center (iNANO), University of Aarhus, Denmark

A post-doctoral research position in Protein Nanopatterning is available at the Nanobiointerfaces group (www.inano.dk/sw16190.asp) at the iNANO center, Univ. Aarhus Denmark starting immediately. The position is for 1 year with the possibility for extension for up to a further year (1+1 years).

The project is focused on the immobilisation of cell binding proteins (ECM proteins such as fibronectin, laminin and osteopontin and membrane bound proteins such as cadherins) with one or more types of protein co-immobilised into nanoscale patterns. The patterned substrates will be used to study the mechanisms of cell-surface adhesion and to explore the potential to regulate stem cell function. The fabrication approaches will make use of nanoparticle and macromolecular self-assembly as templates for protein patterning [1]. Characterisation techniques will combine imaging (e.g. atomic force microscopy AFM and nanoscale optical microscopy (e.g. 4pi, STED) and mass spectrometry) and quantification by e.g. Quartz Crystal Microbalance (QCM-D) [2], Surface Plasmon Resonance (SPR and LSPR [3]), X-ray Photoelectron Spectroscopy (XPS). The project will involve both nanometre biointerfacial engineering and basic studies of macromolecule organisation at the nanoscale.

The successful applicant will have a Ph.D in Nanoscience, Surface chemistry, Biophysics, Materials Science or related disciplines, with a successful and documented scientific record. Previous experience of nanofabrication, surface modification, protein coupling and/or nanoscale characterisation being an advantage.

The interdisciplinary research center (iNANO) (www.inano.dk) is a major research and education centre based at the University of Aarhus, hosting 60 senior scientists, ~100 post-docs and ~120 Ph.D students. The center combines expertise and faculty from physics, chemistry, molecular biology and medicine to carry out world class interdisciplinary research. The center gives access to a broad range of infrastructure, tools and expertise including a newly inaugurated clean-room. With a 5 year undergraduate nanotechnology programme and nanoscience graduate school (www.inanoschool.dk) the center provides a full educational environment. In addition to the large base of basic research, the center has a large number of ongoing industrial projects and partnerships.

For further information contact Associate Professor Duncan Sutherland (duncan@inano.dk, tel +45 89 42 55 47). Potential candidates should submit their CV’s and full publication list to duncan@inano.dk