International Postdoc in Systems Biology: ”*Network medicine approach to cancer progression”*

The Cellular Signal Integration Group (**C-SIG**) is a network biology research group located at the Center for Biological Sequence Analysis (**CBS**) at the Technical University of Denmark (**DTU**). The center was formed in 1993 to conduct basic research in the fields of bioinformatics and subsequently systems biology and is divided into twelve specialist research groups. CBS represents one of the largest computational biology centers in academia in Europe and has a highly multi-disciplinary profile (biologists, biochemists, MDs, physicists, statisticians, and computer scientists) with a ratio of 2:1 of bio- to nonbio-backgrounds. In C-SIG, we explore biological systems by developing and deploying algorithms aimed to predict cell behavior with accuracy similar to that of weather or aircraft models. Our focus is on studying cellular signal processing and decision-making.

Job description
A Postdoc position is available in Dr Rune Linding's Cellular Signal Integration Group (**C-SIG**, **http://www.lindinglab.org**) at CBS. Dr Linding is a world-leading network and systems biologist whose laboratory is interested in the mechanisms by which cells use signaling networks to respond to changes in their environment. We are seeking highly motivated, bright researchers and our lab is a dynamic, highly productive and stimulating environment, where we provide world-class multi-disciplinary training.

In this position, the successful applicant will work in a fast-paced dynamic environment performing studies to advance research into biological systems, in order to develop new understanding and therapies of complex human diseases like cancer.

We are seeking an experienced and motivated Postdoc to work on a project related to our recent studies on phosphorylation networks (Bakal, Linding et al. Science 2008, Tan et al. Science 2009 and 2011, Tan et al. Science Signaling 2009 and Jørgensen et al. Science 2009). Despite many studies, it is still unclear whether BRAF kinase signals only through MEK and CRAF, or instead it also phosphorylates other substrates. Therefore, we aim to apply a powerful systematic approach to this question. We have obtained a linear phosphorylation motif for BRAF, which will enable us to computationally predict potential substrates and model networks for this kinase. This will potentially allow us to propose a future network medicine strategy for melanoma and pave the way for similar studies in other cancers/diseases. The project involves an international collaboration with Prof Neal Rosen's lab at the MSKCC (New York, USA) and Prof Ruedi Aebersold's lab at the ETH (Zürich, Switzerland), and is an integral part of the newly established integrative network biology initiative (INBi) at DTU.

Qualifications
Candidates must hold a PhD degree (or equivalent) in molecular biology, biochemistry, cell biology or a relevant field, and have experience of mammalian tissue culture, protein biochemistry and signal transduction. Experience in RNAi screening and cancer/tumour biology is a distinct advantage. Experience with biological mass spectrometry (nLC-ESI-MS), quantitative proteomics or phospho-proteomics and bioinformatics is advantageous.

The post-holder must be keen to evaluate and analyse data of heterogeneous types and apply computational biology and bioinformatics (including statistics, machine learning and sequence analysis) to reach a deeper understanding of data at hand. We are seeking highly motivated, bright researchers and our lab is a dynamic, highly productive and stimulating environment, where we provide world-class multi-disciplinary training.

DTU offers
DTU offers an interesting and challenging job in an international environment focusing on education, research, public-sector consultancy and innovation, which contribute to enhancing the economy and improving social welfare. We strive for academic excellence, collegial respect and freedom tempered by responsibility. DTU is a leading technical university in northern Europe and benchmarks with the best universities in the world. We will offer an attractive salary and the opportunity to take part in a frontier cancer combating research program. Foreign nationals will be able to enter Denmark on a very low tax rate.

Salary and terms of employment
The appointment will be based on the collective agreement with the Confederation of Professional Associations. The allowance will be agreed with the relevant union.

The period of employment is **3 years** with possibility of extension.

Application procedure
We must have your online application by **5th March 2012**. To apply, please open the link "apply for this job online" and fill in the application form and attach your application, CV and diploma. The material that should be given consideration in the assessment must be attached.

Applications should be submitted in English.

Applications and enclosures received after the deadline will not be considered.

All interested candidates irrespective of age, gender, race, disability, religion or ethnic background are encouraged to apply.

Further information
Further information may be obtained from Dr Rune Linding, tel: +45 2365 1941 or linding@cbs.dtu.dk.
You can read more about the Center for Biological Sequence Analysis on **http://www.cbs.dtu.dk** and about Rune Linding's Research Group at **http://www.lindinglab.org**.