

## Post-doctoral positions in Bioinformatics and Systems Biology

Several post-doctoral positions are currently open at the newly established Laboratory of Bioinformatics and Systems Biology at the IBB - Center of Molecular and Structural Biomedicine, University of Algarve in Faro, Portugal. We aim to develop novel methods for the integration and analyses of data and information from divergent resources in molecular biology and medicine. Our ultimate goal is the construction of computational models which bridge the various levels between elementary molecular processes and their physiological manifestations.

At present, we are seeking highly motivated post-doctoral researchers in bioinformatics and systems biology for the following projects:

1. **Development of an integrative knowledgebase for medical systems biology.** In collaboration with research centers in Germany, UK and USA, we are establishing a unique knowledgebase for medical systems biology based on our highly successful Unified Human Interactome (UniHI) database ([www.unihi.org](http://www.unihi.org); Chaurasia et al. NAR 2007, 2009). For this project, we seek a **bioinformatician** with distinguished expertise in database management, implementation of web-applications and data integration for the position as lead developer of our new knowledgebase.
2. **Interaction networks in cancer.** In this project, we will examine changes in interaction networks during oncogenesis. The initial focus will be on the integration and analysis of physical protein-protein and transcriptional regulatory interactions - and their dynamics - in T-cell leukaemia in close collaboration with experimental scientists. Of special interest will be the identification of new drug targets. We seek a **bioinformatician/computational biologist** who has expertise and interest in the analysis of molecular networks and gene expression data.
3. **Systems biology of neurodegenerative diseases.** Together with experimentally working groups at the IMM (Lisbon) and MDC (Berlin) we will identify molecular network structures associated with Parkinson's and other neurodegenerative diseases in order to detect novel disease modifiers. We seek a **bioinformatician/computational biologist** with expertise and interest in statistical analyses of networks, gene expression and SNP data.
4. **Regulation of iron homeostasis in cyanobacteria.** To determine in detail the regulatory machinery for the essential process of iron homeostasis in cyanobacteria, we will apply a combined computational and experimental approach in this project. The studies will be performed in collaboration with leading experimental groups in Israel, Germany and USA. (Lindell et al. Nature 2007, Steglich et al. Plos genetics 2008). For this project, we seek a **systems biologist** with *both* experimental *and* computational skills as well as interest to perform gene expression profiling and sequence analyses of cyanobacteria.

Our newly established lab offers a stimulating environment for pursuing cutting-edge research. It is associated with the Institute for Biotechnology and Bioengineering ([www.ibb.pt](http://www.ibb.pt)), a nation-wide research institution, and is part of the Center for Molecular and Structural Biomedicine ([www.cbme.ualg.pt](http://www.cbme.ualg.pt)) at the University of Algarve which is located in Faro, a city that lies in the heart of one of the most beautiful coastal landscapes in Europe. Beside the outlined projects, we are open to alternative research initiatives by possible candidates. For further information, please visit our website ([www.cbme.ualg.pt/mfutschik\\_cbme.html](http://www.cbme.ualg.pt/mfutschik_cbme.html)) or contact Matthias Futschik ([mfutschik@ualg.pt](mailto:mfutschik@ualg.pt))

Candidates should send by email a CV, letter of motivation and contacts for references to Dr. Matthias Futschik ([mfutschik@ualg.pt](mailto:mfutschik@ualg.pt)), until **May 15th** (first application round) or **August 15th 2009** (second application round). The posted positions will be kept open until filled. Selected candidates will apply to a PostDoc Fellowship from the Fundação para a Ciência e Tecnologia (FCT). These FCT Fellowships are expected to start October 2009 or January 2010.