**Functions of SMC5-6 complex and its subunits**

Postdoctoral Research Fellow– Group of Chromatin Molecular Complexes, CEITEC - Central European Institute of Technology, Brno, Czech Republic

A postdoctoral position is available in the laboratory of Dr Jan Palecek to investigate functions of SMC5-6 complex and its subunits. The SMC5-6 protein complex is one of the three SMC (Structural maintenance of chromosomes) protein complexes present in all eukaryotes. SMC5-6 is involved in chromatin dynamics such as segregation and responses to different types of DNA damage. The core of the complex is formed by SMC5-SMC6 heterodimer, which is associated with four conserved non-SMC subunits. The project will aim to elucidate function and activities of the complex and its subunits. Molecular biology and genetic approaches in the fission yeast model, human tissue cultures and biochemical approaches will be used.

See references:

Palecek, J., et al.: The Smc5-Smc6 DNA repair complex: Bridging of the Smc5-Smc6 heads by the kleisin, Nse4, and non-kleisin subunits, J Biol Chem 281: 36952-9, 2006

Hudson, J.J.R., et al.: Interactions between the Nse3 and Nse4 Components of the SMC5-6 Complex Identify Evolutionarily Conserved Interactions between MAGE and EID Families. (2011) PLoS ONE, 6(2)

Guerineau, M., Kriz, Z., K., Kozakova, Bednářova, Janos, P., Palecek, J.: Analysis of the Nse3/MAGE-Binding Domain of the Nse4/EID Family Proteins. (2012) PLoS ONE, 7(4)

We are seeking an outstanding applicant with or without specific yeast experience but with strong motivation and passion to carry out research in the given field.

You will be part of CEITEC – Central European Institute of Technology in Brno, Czech Republic ([www.ceitec.muni.cz](http://www.ceitec.muni.cz)), an academic research institution established jointly by Masaryk University, Brno University of Technology, Mendel Agriculture University, University of Veterinary and Pharmaceutical Sciences and Institute of Physics of Materials. This new institute will host 600 scientists in state-of-the-art equipped laboratories. CEITEC also hosts number of high throughput –omics core facilities, outstanding structural biology and imaging equipment and bioinformatics support. An interest in close collaboration with local experimental groups is essential.

The position is available from 02/2013

For further information please contact Dr. Jan Palecek, email: [jpalecek@sci.muni.cz](mailto:jpalecek@sci.muni.cz), tel: +420549495952.

CV including the list of publications and 2 recommendation letters should be sent electronically to [jpalecek@sci.muni.cz](mailto:jpalecek@sci.muni.cz) by 31 December, 2012.