INSTITUTO DE BIOLOGIA MOLECULAR E CELULAR
INSTITUTE FOR MOLECULAR AND CELL BIOLOGY

Post-doctoral Fellowship (M/F)

Title of the Project: The impact of aneuploidy on tumorigenic potential of Adult Stem Cells, PTDC/BEX-BCM/1921/2014

Internal Reference: PR041602

Working place: Cell Division and Genomic Stability, I3S (Instituto de Investigação e Inovação em Saúde, Universidade do Porto, Rua Alfredo Allen, 208, Porto) supervised by Prof. Claudio Sunkel

Summary of work program: Aneuploidy is a hallmark of solid sporadic cancers. However, its putative oncogenic role is not fully understood. The biological consequences of chromosome numeric alterations seem to be highly context dependent as the cellular phenotypes vary considerably with the cellular model. While the majority of cells have mechanisms acting to prevent aneuploidy and preserve genomic stability, embryonic stem cells seem to behave as an exception to this paradigm, since they tolerate and proliferate as aneuploidy.. Whether this high tolerance to aneuploidy is also found in adult stem cells remains unknown. Thus the major goal of this project is to determine how adult stem cells respond to aneuploidy. Previously, our laboratory and others have shown that induction of aneuploidy in Drosophila imaginal discs can lead to tumorigenesis when apoptosis is blocked. However, these experiments were performed in tissues undergoing development and therefore their comparison with most human tumors remains limited. Thus, the aim of the work is to implement a cancer model in the midgut of the adult fly taking advantage of the advanced genetics techniques available is this organism.

Candidate profile: We are looking for a high motivated and independent fellow holding a PhD degree in Biochemistry, Biology or related area and having at least one paper as first author in peer-reviewed journals. Preference will be given to candidates with prior experience in confocal microscopy, Drosophila genetics, Candidates must have experience in Drosophila genetics, including use of the GAL4 system, as well as practical experience in tissues transplantation assays and knowledge on the mechanisms that regulate cell division. Good-knowledge of spoken and written English is essential. Autonomy in the development of computer based analysis of microscopy data is also positively considered.

Application procedure: Applications should include a letter of motivation, *curriculum vitae*, at least one reference letter and a short description of research achievements. Applications must be submitted between May 12th and 25 Mayth of 2016 on the IBMC webpage: http://www.ibmc.up.pt/gestaocandidaturas/index.php?codigo=PR041602

Legislation and applicable laws: Employment at the IBMC is regulated by current laws relating to the Statute of Science Research Fellows of Fundação para a Ciência e Tecnologia, I.P. - 2015, namely Law 40/2004 of August 18, amended and republished by Decree-Law No. 202/2012 of 27 August and the Regulation of Scientific Research Studentships of the IBMC approved by Fundação para a Ciência e Tecnologia (www.ibmc.up.pt/fellowships.php)

Evaluation of applications:
The candidates with the required profile will be selected based on the written documentation (CV (35%), motivation letter (5%) and references (10%)). The most qualified candidates from the initial selections will be then subjected to a final selection step based on a personal interview (50% to sum up with the evaluation of the written documents).

Jury: President – Claudio Sunkel (PhD); Ordinary members – Eurico Morais de Sá (PhD) and Carlos Conde (PhD).

Results: the final results are announced at the IBMC web site, and the approved candidate contacted via e-mail.

Grant conditions:
The fellowship is expected to start in the 1st of June, 2016 and will be awarded initially for 12 months, being renewable for a maximum of 36 months. The monthly amount of the fellowship is € 1495 (http://alfa.fct.mctes.pt/apoios/bolsas/valores), preferentially paid by bank transfer. The selected candidates will benefit from an excellent research environment, and have access to state of the art facilities for advanced light microscopy.