

Research Fellowship (m/f)

Project title: “The Impact of Aneuploidy on Adult Stem Cell Behavior”

(financiado pelo OE, no âmbito do PIDDAC - e através da Fundação para a Ciência e a Tecnologia), nas seguintes condições:

Reference: PTDC/BEX-BCM/1921/2014

Internal Reference: PR041801

Candidate profile:

We are looking for candidates with a Master's degree in Biology, Biochemistry and related fields with a final score of 18 or higher. The candidate must have experience and full autonomy in *Drosophila* genetics, cell biology, molecular biology and confocal microscopy. Knowledge of English language, both spoken and written, and good interpersonal qualities in the context of a multidisciplinary research team are also essential attributes.

Background and work plan:

To maintain genome stability the events underlying mitotic progression must be carefully coordinated and monitored. Chromosome segregation errors lead to aneuploidy, a hallmark of cancer cells. The fidelity of chromosome segregation in mitosis relies on the attachment of sister kinetochores (KTs) to microtubules (MTs) of opposite spindle poles and on the Spindle Assembly Checkpoint (SAC), a biochemical pathway that prevents anaphase until the former state is achieved. Precise regulation of KT-MT interactions requires the activity of Polo/Plk1 kinase, which is often deregulated in cancer cells. The mechanism by which Polo/Plk1 fine-tunes KT-MT attachments is complex and results from the control that the kinase exerts over a number of both MT stabilizing and destabilizing factors. How these seemingly antagonistic Polo-regulated inputs are coordinated in space and time and integrated at KT-MT attachments to ensure the fidelity of KT-MT interactions remains unclear. In the present project we will combine *Drosophila* genetics, biochemistry and confocal microscopy to discover new pathways of regulation and elucidate the molecular and mechanical switches that control Polo activity and how these are related to MT attachment regulation. The work will be developed at the Chromosome and Genomic Stability group of i3S under the supervision of Claudio Sunkel.

Application procedure:

Applications should include a letter of motivation, CV and degree's certificate and should be submitted between July 5th and July 18st 2018 on the IBMC webpage:

<http://www.ibmc.up.pt/gestaocandidaturas/index.php?codigo=PR041801>

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 will be evaluated based on the written documentation (CV and motivation letter) 100%. The most qualified candidates could eventually be selected for a personal interview. If an interview is requested, the total evaluation will be based on CV (50%) and interview (50%).

Jury:

President: Claudio Sunkel (PhD);

Ordinary members: Carlos Conde (PhD), Pedro Resende (PhD)

Grant conditions:

The fellowship is due to start in August 1st 2018. The grant will be awarded for 5 months and is not renewable. The monthly amount of the fellowship is € 980 (<http://alfa.fct.mctes.pt/apoios/bolsas/valores>) paid by bank transfer.