IBMC - Instituto de Biologia Molecular e Celular

Research Fellowship Position (f/m)

Internal Code: Norte2020CANCER23

Project: NORTE-01-0145-FEDER-000012 – Advancing cancer research: from basic knowledge to application: Decoding new factors that dictate cancer cell fate during a prolonged mitotic arrest

Title: VECTOR - noVEl therapeutiC Targets and mOdels for cancer

IBMC/i3S is opening **2 (two) Research Fellowship** to join its Research Program in Novel therapeutic targets and models for cancer

We are looking for two Fellows holding an **MSc degree** in Biology, Biochemistry or Bioengineering with a final score > 17. The candidate must have experience and full autonomy in cell biology, molecular biology, protein biochemistry. Good oral and written communication skills in English are required.

Group Chromosome Instability & Dynamics

PI Cristina Ferrás

Workplan:

Mitosis is the process by which a single eukaryotic cell partitions its genetic material into two daughter cells. Assembly of a microtubule based bipolar structure – the mitotic spindle - is essential to ensure accurate chromosome segregation. One extensively used approach to treat cancer is the use of drugs that target the mitotic spindle. Although these microtubule toxins demonstrate impressive efficacy a major unresolved issue is to define which tumors are likely to respond to these anti mitotic agents. It is well established that spindle drugs activate the spindle assembly checkpoint (SAC) leading to mitotic arrest. Following a prolonged arrest several outcomes have been described. While some cells appear to die in mitosis, others exit mitosis without dividing.
The prevailing model suggests that cell fate after mitotic arrest depends on two competing networks, one involving caspase activation and the other protecting cyclin b1 from degradation. We recently demonstrated that during a prolonged mitosis ATP is de novo synthesized and this is a critical factor for SAC robustness and cell fate determination. However, little is known regarding the impact of energy metabolism on a prolonged mitosis and it remains unclear which processes are energy dependent under conditions that prevent SAC satisfaction. In this project we aim to mechanistically understand how de novo ATP is contributing to SAC response and to elucidate which factors are ATP dependent during a prolonged mitosis.The work will be developed at Instituto de Investigação e Inovação em Saúde - i3S, Porto, Portugal.

The Research Fellowship will be for 4 months, eventually renewable up to 6 months if the project is extended, and it is expected to start in January 1st 2019. The successful candidates will be encouraged to apply for National funding. The selected candidates will benefit from an excellent research environment, and have access to state of the art facilities including Advanced Light Microscopy, Flow Cytometry, Genotyping, Animal House (including antibody production), P3 Facilities, Electron Microscopy, Protein Production and Purification and super-resolution microscopy.

The fellowship amount is 980 euros, paid by bank transfer, preferentially.

(http://alfa.fct.mctes.pt/apoios/bolsas/valores)

Fellowships are regulated by current laws relating to the Statute of Science Research Fellows, 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 IBMC approved by Fundação para a Ciência e Tecnologia (http://www.fct.pt/apoios/bolsas/docs/RegulamentoBolsasFCT2015.pdf)

Applications must be received from 7th December until December 17th, 2016.
Selection Comitte:
Cristina Ferrás, PhD
Carolina Ramos, PhD
Helder Maiato, PhD

To apply for the Research Fellowship the interested candidate must hold a Master degree and submit the following documents *via* the online application system (www.ibmc.up.pt/institute/open-positions): a) Complete CV; b) Letter of motivation; c) Names and contacts of 2 potential referees and d) Master certificate:

http://www.ibmc.up.pt/gestaocandidaturas/index.php?codigo=Norte2020CANCER23

The ranking list of candidates will be published at IBMC website, and the selected candidate will be notified by email.

For further information see www.ibmc.up.pt and www.i3s.up.pt