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

INSTITUTO
DE INVESTIGAÇÃO
E INOVAÇÃO
EM SAÚDE
UNIVERSIDADE
DO PORTO

**PhD student Fellowship (M/F)**

**Project:** ERC-2015-CoG-681443-CODECHECK

**Title:** "Cracking the Code Behind Mitotic Fidelity: The Roles of Tubulin Post-Translational Modifications and a Chromosome Separation Checkpoint"

**Internal Reference:** PR332001

We are recruiting a PhD student to join the Chromosome Instability & Dynamics research group at the IBMC/i3S.

**Requirements**: The candidate must be a PhD student with a MSc in Biology or related areas and a BSc in Biology, or related areas. We are looking for a highly motivated PhD student, with previous experience in tubulin PTMs and mitosis. Candidates with solid experience with cell culture, western blot analyses, advanced microscopy and state-of-the-art molecular tools will be preferential.

**Work plan**: The work will be focus on understanding the role of tubulin post-translational modifications in cancer (please see Abstract and Plan of Work below).

**Legislation and Salary:** The fellowship is regulated by current laws relating to the Statute of Science Research Fellows, namely Law 40/2004 of August 18, amended by DL 123/2019, from 28th August and the Regulation of Scientific Research Studentships of the IBMC. The monthly allowance is 1064 € (net and tax free, http://alfa.fct.mctes.pt/apoios/bolsas/valores).

**Location**: The work will be developed at the Chromosome Instability & Dynamics laboratory of the IBMC, i3S, under the supervision of Helder Maiato.

**Duration**: 11 months, possibly renewable, to start on February 1st, 2020.

**Selection method**: The candidates will be listed according to their CV, experience in the proposed areas and methodologies, and the requirements of the call. If justified, the pre-selected top candidates will be interviewed (interview 75% and CV 25%).

**Jury:**
President: Helder Maiato
Members: Bernardo Orr and Antonio Pereira

erc European Research Council

**Application deadline and submission forms:** The call will be open from 10th to 23th January 2020. Proposals must include CV, Master certificate and registration at the PhD program. Applications must be done by online submission:

http://www.ibmc.up.pt/gestaocandidaturas/index.php?codigo=PR332001

**Form of notification of results:** The final results of the evaluation will be publicized in the IBMC Web site, through a list sorted by final score, and the selected applicant will be notified by email.

**Abstract and Plan of Work:**

The tubulin code is described as a set of post-translational modifications (PTMs) of α- and β-tubulin heterodimers and a variety of tubulin isotypes that regulate distinct microtubule functions and properties. These tubulin PTMs and isotypes dynamically control the localization and function of mitotic molecular motors through a differential binding affinity, ensuring mitotic efficiency and faithful genome duplication. Although it is known that the deregulation of tubulin PTMs could lead to genomic instability, a hallmark of cancer cells, and that there are other important links between tubulin PTMs and cancer, their regulation and the implications in cancer cell function remain poorly understood. Therefore, this project aims to characterize the regulation of tubulin PTMs in the NCI-60 panel of human cancer cell lines with the goal of understanding their implications in cancer cell features.