IBMC - Instituto de Biologia Molecular e Celular

BDP fellowship (f/m)

Internal Code: Norte2020CANCER22

Project: NORTE-01-0145-FEDER-000029- *Advancing cancer research: from basic knowledgment to application*

Title: The HOXOME of cancer

IBMC/i3S is opening **1 (one) Fellowship (BPD)** to join its Research Program in Cancer Biology. We are looking for a Fellow holding a PhD Degree in Biology or related fields wiith experience and full autonomy in working in Molecular and Cellular Biology. English language, both spoken and written, and good inter-personal relationships in the context of a multidisciplinary research team are essential attributes. Preference will be given to candidates with large experience in breast cancer research.

Group: Cell Growth and Differentiation

Team leader: Renata Freitas

Work Plan:
HOX genes play a crucial role during embryonic development, regulating a variety of processes that include cell proliferation and death, cell-to-cell signaling, differentiation and motility. However, aberrations in their expression have been reported not only during abnormal development but also in malignancy. Indeed, the current *state of the art*, strongly suggest that altered HOX gene expression leads, in distinct contexts, to both oncogenesis and tumor suppression. Therefore, studies aiming to characterize the expression and function of HOX genes are absolutely fundamental in cancer diagnosis and therapy. Here we will characterize the HOX signature in distinct epithelial-derived cancers (gastric, breast, and colorectal) using a RT-qPCR platform. For the Hox genes found to be modified in these cancers we will test their tumorigenic or tumor suppressor potential using functional assays in cancer cell lines. We will then pursue to their functional characterization using zebrafish as a preferential *in vivo* model system. This approach will make possible to compare HOX-modified or none modified cancer cells during their proliferation, migration and differentiation *in vivo*. In parallel we will generate zebrafish transgenic lines with modified HOX expression in particular tissues in order to generate *in vivo* disease models for transcriptomic studies, chemical screens or anti-tumoral synthetic peptide tests. Overall, this project offers an opportunity to translate basic research into clinically relevant information, improving the medical intervention in cancer treatment.

The work will be developed at Instituto de Investigação e Inovação em Saúde - i3S, Porto, Portugal. The Fellowship will be for period of 4 months starting in October 15th 2018.

The fellowship amount is 1495 euros, paid by bank transfer, preferentially.
(http://alfa.fct.mctes.pt/apoios/bolsas/valores)

INSTITUTO DE INVESTIGAÇÃO E INOVAÇÃO EM SAÚDE UNIVERSIDADE DO PORTO

CCDRN Comissão de Coordenação e Desenvolvimento Regional do Norte
NORTE2020 Programa Operacional Regional do Norte
PORTUGAL 2020
UNIÃO EUROPEIA Fundo Europeu de Desenvolvimento Regional

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)

Selection Committee:
Renata Freitas, PhD
José Bessa, PhD
Carla Lopes, PhD

Applications are open from September 13 th to October 3rd, 2016.

To apply for the Postdoctoral Fellowship interested candidates must hold a PhD degree and submit the following documents a) Complete CV; b) Motivation Letter; and c) PhD Certificate, *via* the online application system:
http://www.ibmc.up.pt/gestaocandidaturas/index.php?codigo=Norte2020CANCER22

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