IBMC - Instituto de Biologia Molecular e Celular

Research fellowship (f/m)

Internal Code: Norte2020NEURO80

Project: NORTE-01-0145-FEDER-000008, Porto Neurosciences and Neurologic Disease Research at i3S

Title: Characterisation of the roles of PS3 integrin in Drosophila axonal targeting

IBMC/i3S is opening **1 (one) BTI (Licenciado)** to join its Research Program in Neurosciences.

Group and PI: Cell Growth and Differentiation, IBMC-i3S under the supervision of Dr Paulo Pereira.

Candidate profile: Degreee (Licenciatura) in Genetics, Biology or related disciplines with an average mark* of 13 or higher. Demonstrated research experience with *Drosophila melanogaster* and immunohistochemistry techniques are essential requirements.

*according to the Portuguese classification system or equivalent international grades.

Selection: Candidates will be ranked according to their CV and letter of motivation using a scale ranging from 0 to 20. Candidates may be invited for an interview by the Selection Committee, evaluated using a scale ranging from 0 to 20. If interviews are made, final candidate ranking will include curricular/letters evaluation (weight of 75%) and outcome of interview (weight of 25%).

Work Plan:
Integrins are cellular receptor proteins important for cellular adhesion, migration and also signal transduction. Integrins and their ligands play key roles in nervous system development, as they regulate neural precursor cell migration, proliferation and survival, and glia myelination. Integrins are a family of type I transmembrane proteins that connect the cell with extracellular matrix (ECM) proteins, such as collagen and laminins, or to cellular receptors. They are formed by heterodimers of one α and one β subunit that specify the ligand to which integrin binds.
This project aims to further understand the role of different integrin heterodimers in photoreceptors-glia interactions using Drosophila. We have previously shown that PS2 and PS3 integrin heterodimers have different and specific functions in the development of retinal glia, with αPS2 being essential for retinal glia migration from the brain into the eye disc. Surprisingly αPS3 is not required for retinal glia migration, but together with Talin, it functions in glial cells to allow photoreceptor axons (R-axons) to target to the optic stalk. The main aim of this project will be the characterisation of the role of αPS3 in axon-glia interactions.

References:
1 - Tavares L, Correia A, Santos MA, Relvas JB and Pereira PS. (2017) dMyc is required in retinal progenitors to prevent JNK-mediated retinal glial activation. PLoS Genet. 13(3):e1006647.

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

2 - Tavares T, Pereira E, Correia A, Santos M, Amaral N, Martins T, Relvas JB and Pereira PS (2015) Drosophila PS2 and PS3 integrins play distinct roles in retinal photoreceptors-glia interactions. GLIA 63(7):1155-65.

The Research Fellowship will be for **3 months** and it is expected to start **1st July 2019**.

The fellowship amount is 752.38 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)

Selection Committee:
Paulo Pereira (PhD), Renata Freitas (PhD), Carla Lopes (PhD)

Applications are open from 27th May to 7th June 2019.

To apply for the Research Fellowship interested candidates must submit the following documents a) Complete CV; b) Letter of Motivation and c) Degree Certificate, *via* the online application system:
http://www.ibmc.up.pt/gestaocandidaturas/index.php?codigo=Norte2020NEURO80

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