

IBMC - Instituto de Biologia Molecular e Celular

Research fellowship - BIM (f/m)

Internal Code: Norte2020NEURO23

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

Title: Sphingolipid signaling and mitochondrial function during ageing in yeast

IBMC/i3S is opening **1 (one) BIM Fellowship** to join its Research Program in **Yeast models of ageing and disease**

Applicants should hold a **Msc** in Biochemistry, Molecular and Cell Biology or related fields, with a final score of at least 17. The candidate should have experience and full autonomy in working with the yeast research model and good skills in molecular biology, biochemistry and microscopy. Preference will be given to candidates with previous experience in the mitochondrial field, sphingolipid signaling and/or iron homeostasis. Applicants should be fluent in English, have good interpersonal relationship skills and be available to join the team immediately.

Group and PI: Yeast Signaling Networks group, Vítor Costa

Work Plan:

Proper mitochondrial function is crucial for health span. The decline of mitochondrial function during ageing or associated with neurodegenerative diseases leads to a bioenergetics crisis, impairs iron homeostasis and causes oxidative stress, increasing cell death. Mitochondria are regulated by protein kinases or phosphatases that mediate cellular responses to nutrients, energy status and stress signals, including sphingolipids such as long chain sphingoid bases (LCBs) and ceramide. We have previously shown that yeast lacking Isc1p, an orthologue of mammalian neutral sphingomyelinase type 2, exhibit mitochondrial dysfunctions, iron overload and premature ageing caused by deregulation of cell signalling proteins. The yeast model of Niemann-Pick type C1, a lysosomal storage disease, also exhibit mitochondrial dysfunctions associated with the activation of Pkh1-Sch9 signalling by LCBs. In this project, phosphoproteomic assays and site-directed mutagenesis approaches will be used to characterize the role of sphingolipids and nutrient signalling pathways in the regulation of mitochondrial proteins and iron homeostasis during yeast ageing.

The work will be developed at Instituto de Investigação e Inovação em Saúde - i3S, Porto, Portugal.

The Research Fellowship will be for 6 months and it is expected to start in July 1st 2016.

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>)

Selection Committee:

Vítor Costa, PhD

Pedro Moradas Ferreira, PhD

Clara Pereira, PhD

Applications are open from June 1st until June 15th, 2016.

To apply for the Postdoctoral Fellowship, interested candidates must hold a Master degree and submit the following documents a) Complete CV; and b) Letter of Motivation, *via* the online application system:

<http://www.ibmc.up.pt/gestaocandidaturas/index.php?codigo=Norte2020NEURO23>

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