



Research Fellowship (m/f)

Project title: "The role of CD18 in the AML-microenvironment interaction"

supported by a grant from Fundação Amélia de Mello in the following conditions:

Internal Reference: FAM1901

Candidate profile:

We are looking for candidates with a Master's degree in Biology or related fields with a final score of 14 or higher. The candidate must have previous experience with animal work and flow cytometry and full autonomy in Molecular and Cellular Biology and performance of *in vitro* assays. Preference will be given to candidates with large experience in animal handling. Knowledge of English language, both spoken and written, and good interpersonal qualities in the context of a multidisciplinary research team are also essential attributes.

Background and work plan:

Leukemic cells establish *in vivo* dynamic interactions with the surrounding bone marrow microenvironment or niche (Hawkins and Duarte et al. Nature. 2016). Acute myeloid leukemia (AML) is an aggressive blood cancer with poor prognosis and limiting treatment strategies. Importantly, chemoresistant AML cells survive in the bone-lining endosteum, where they interact with local bone marrow stroma. We have recently shown that AML cells selectively remodel the endosteum and target the endosteal vasculature and osteoblasts (Duarte D et al. Cell Stem Cell. 2018). In this project we aim to study the role of CD18 and cell adhesion in the establishment of AML-microenvironment interactions in the endosteum. We will use primary patient samples from IPO-Porto, leukemia cell lines, pre-clinical mouse models of AML and mouse mutants for key genes. The candidate will perform cell culture, transfection and transduction, *in vitro* assays, flow cytometry, immunofluorescence, confocal microscopy of the bone marrow and gene expression analysis. The project has a strong focus on *in vivo* experimental work. The project includes international collaborations. We aim to uncover novel players participating in the interaction between leukemic cells and their surrounding microenvironment.







The work will be developed at the *Basic and Clinical Research in Iron Biology* group of i3S under the supervision of Delfim Duarte.

Application procedure:

Applications should include CV with 2 references (and respective contacts), the degree's certificate and a motivation letter and should be submitted between 27st February 2019 and 15th March 2019 on the IBMC webpage: http://www.ibmc.up.pt/gestaocandidaturas/index.php?codigo=FAM1901

Legislation and applicable laws: Employment at the IBMC is regulated by current laws relating to the Statute of Science Research Fellows of Fundação para a Ciência e Tecnologia, I.P. - 2015, 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 the IBMC approved by Fundação para a Ciência e Tecnologia (www.ibmc.up.pt/fellowships.php).

Evaluation of applications:

The candidates will be evaluated initially based on the written documentation: CV (60%) and motivation letter (40%). The top 3 most qualified candidates will be selected for a personal interview and the final score will be based on written documentation (CV + motivation letter, 50%) and interview (50%).

Jury:

President: Delfim Duarte (MD, PhD); Ordinary members: Graça Porto (MD, PhD), Tiago Duarte (PhD)

Grant conditions:

The fellowship is due to start in April 1st 2019. The grant will be awarded for 6 months and is renewable for up to 24 months. The monthly amount of the fellowship is € 989,70 paid by bank transfer.

