

Post-doc position at the Institute of Molecular Genetics in Montpellier, France

SUMO, a new therapeutic target in Acute Myeloid Leukemia

A 3-year postdoctoral position is available in the group « Oncogenesis and Immunotherapy » under the supervision of Guillaume Bossis, at the IGMM in Montpellier. The starting date is flexible between January and April 2019.

Summary of the project

Acute Myeloid Leukemias are the only hematological malignancies that have not benefited from significant therapeutic improvement in the last 40 years. A large fraction of the patients (20-30%) is refractory to the chemotherapy (anthracyclin and cytarabin) and the relapse rate are very high. We have shown that SUMOylation, a post-translational modification of the ubiquitin family, is involved in AML resistance to both chemotherapies (Bossis et al, Cell Reports, 2014) and differentiation therapies using all-trans retinoic acid (Baik et al, Cancer Research, 2018). Our work suggests that pharmacological targeting of the SUMO pathway could constitute a new therapeutic approach in AML treatment. On this basis, the proposed project will aim at developing new clinically relevant inhibitors of the SUMO pathway and determining their therapeutic potential in AML using preclinical models developed in the team.

Job description

The project is funded by MUSE (Montpellier University of Excellence) and involves a close collaboration with the team of Muriel Amblard (IBMM, Montpellier) and Maria Lois (CRAG, Barcelona) who will identify inhibitors of SUMOylation and the Clinical Hematology Department of the Montpellier Hospital, who will provide patient samples. The fellow will determine the efficiency of the new inhibitors using both biochemical (collaboration with Frauke Melchior's team, ZMBH, Heidelberg) and cell biology assays. Once selected, the best candidates will be analyzed for their anti-leukemic properties *in vitro* (cell lines, patient cells) and *in vivo* (bioluminescent imaging and patient-derived xenografts). He/she will have access to all the necessary equipment at the IGMM and will benefit from a highly stimulating scientific environment.

Qualification

Applicants should hold a PhD (or get it before starting) and have a solid background in cellular biology. Experience with the use of cytometry and mouse models would be appreciated.

How to apply

Send your CV, letter of motivation and names and addresses of two to three references to : guillaume.bossis@igmm.cnrs.fr