

Post-doc position, Institute of Molecular Genetics, Montpellier, France

Targeting SUMOylation in Acute Myeloid Leukemia

A 2-year postdoctoral position funded by the INCA (French National Cancer Agency) is available in the team [The Ubiquitin Family in Hematological Malignancies](#) at the IGMM in Montpellier. The starting date is flexible between September and November 2022.

Acute Myeloid Leukemias (AML) are severe hematological malignancies with dismal prognosis. We have shown that SUMOylation, a post-translational modification of the ubiquitin family, participates to AML response to both chemotherapies (Bossis et al, Cell Reports, 2014; Boulanger et al, BioRxiv, 2022) and differentiation therapies (Baik et al, Cancer Research, 2018). Moreover, we found that the SUMO pathway is dysregulated in chemoresistant AML and could serve as biomarker of AML response to chemotherapies (Gâtel et al, Life Science Alliance, 2022). Finally, using various preclinical models, we have shown that the targeting of SUMOylation constitutes a promising new therapeutic strategy in AML.

Using CRISPR-Cas9 screens as well as various genomic and proteomic approaches, the goal of the proposed project is to delineate the molecular basis of AML sensitivity to the inhibition of SUMOylation, in particular with clinically relevant molecules such as TAK-981, a first in class SUMOylation inhibitor. The experiments will be carried out in AML cells lines but also AML patient cells and different *in vivo* mouse models.

The candidate will have access to all the necessary equipment at the [IGMM](#) and will benefit from a highly stimulating scientific environment. IGMM conducts fundamental research that is relevant to molecular and cellular medicine, with a particular emphasis on cancer and specific infectious and genetic diseases. It brings together more than 220 people, organized into 18 research teams supported by efficient 7 technical facilities and support services. *The Ubiquitin Family in Hematologic Malignancies* team presently includes 5 senior researchers, 5 PhD students and 1 engineer.

Candidate should hold a PhD degree in biological sciences at the start of the contract. A background in onco-hematology with experience in cytometry and mouse models would be ideal although all relevant profiles will be considered. Experience in CRISPR/Cas9 screens and/or bioinformatic analysis of sequencing data would be appreciated. The candidate should be proficient in English.

Initial funding for 1 year renewable once is already available. The candidate will be encouraged and supported to apply for external follow-up funding or for tenured position at CNRS (chargé de recherche).

Candidates should [apply here](#) and include in their application a CV, letter of motivation and names and email addresses of two to three references. For more information contact: guillaume.bossis@igmm.cnrs.fr