



Internship proposition
One page max
M2 OHNU 2026-27



Lab: CIRCINA Inserm U1307 CNRS 6075

team: Team 9 - CHILD

Name and position of the supervisor: LAMOUREUX Francois, CRCN INSERM

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Candidate: Jade HERAUD-HUCHET

Title of the internship: Preclinical evaluation of new epidrugs in osteosarcoma

Summary of the internship proposal:

Osteosarcoma is an aggressive bone tumor that mainly affects adolescents and young adults. Despite therapeutic advances, the prognosis for metastatic or refractory forms remains poor, underscoring the need for new therapeutic approaches.

Epigenetic modifications play a key role in the tumorigenesis and progression of osteosarcoma. Alterations in epigenetic markers, such as histone modifications or DNA methylation, contribute to tumor development and resistance to conventional therapies. Epidrugs targeting these mechanisms are emerging as a promising therapeutic alternative. The aim of this thesis is to evaluate the preclinical efficacy of new epidrugs in the treatment of osteosarcoma.

This project will focus on several axis:

1-Characterization of epigenetic alterations specific to osteosarcoma using cell lines and patient samples.

2-In vitro evaluation of new epidrug targeting epigenome-regulating enzymes (inhibitors of SMARCA) on tumor cell proliferation, apoptosis and invasion.

3-In vivo validation in mouse models of bone sarcoma to evaluate the efficacy of treatments on tumor growth and the tumor microenvironment.

4-Exploration of resistance mechanisms and potential synergies with conventional treatments chemotherapies.

Based on a multidisciplinary approach combining cellular and molecular biology, pharmacology and in vivo preclinical validation, this project could pave the way for new therapeutic strategies for these poor-prognosis pediatric cancers.

The student will have access to the team resources (equipments, facility...)

Option(s) linked to the project:

Hematology Immunology-Cancerology

Oncology Nuclear Medicine

Option(s) linked to the profile:

Clinical Research Profile
Experimental Biology Profile

Data Analyst Profile