



Internship proposition  
**One page max**  
M2 I3/OHNU 2024-25



Lab: CRCI<sup>2</sup>NA

Team: PETRY (Dr F Paris and Dr C Pecqueur)

Name and position of the supervisor: Catherine Gratas, MCU-PH

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Candidate:

Title of the internship: MiRNA3681HG and therapeutic resistance of glioblastoma

Summary of the internship proposal:

Long non-coding RNA (lncRNA) regulate vital biological processes, and are increasingly shown as instrumental in cancers. We have found that the lncRNA, miR3681HG, is preferentially overexpressed in a subtype of aggressive glioblastoma (GBM), the most common brain cancer in adults, and its expression might be regulated by the microenvironment. Our aim is to study the role of miR3681HG in GBM by overexpressing miR3681HG in tumor cells derived from GBM patients, and by focusing on cell proliferation, migration, and metabolism. This will be performed in 2D and 3D cultures +/- cancer associated fibroblasts derived from mesenchymal stromal cells. These cultures will be treated by irradiation +/- temozolomide (standard GBM therapy) to evaluate the role of miR3681HG in treatment resistance. We will also analyze the global effect of miR3681HG using global transcriptome sequencing. We expect to identify roles of this miR3681HG on GBM progression and/or on the response to treatments.

Option(s) linked to the project:

- Clinical Research Profile
- Data Analyst Profile
- Experimental Biology Profile