



Internship proposition  
**One page max**  
M2 OHNU 2025-26



Lab: CIRCINA\_Nantes

Team: Signaling in Oncogenesis, Angiogenesis, and Permeability

Name and position of the supervisor: Julie Gavard

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Candidate:

Title of the internship: Vesicular Trafficking and Tumor Adaptation in Glioblastoma Stem-like Cells

Summary of the internship proposal:

Glioblastoma represent the most lethal adult primary brain tumors, with a median survival time of 15 months following diagnosis. Within these highly heterogeneous tumors exists a subpopulation of tumor cells, named as Glioblastoma Stem-like Cells (GSCs). They are suspected to play a role in tumor initiation and progression, as well as recurrence and therapeutic resistance. GSCs constantly integrate external maintenance cues from their microenvironment, and therefore represent the most adaptive and resilient proportion of cells within the tumor mass. Tumor niches provide exclusive habitat where stem cells propagate continuously in an undifferentiated state through self-renewal. GSCs are also protected in unfavorable conditions, based on their capacity to down-regulate endocytosis, receptor trafficking, and lysosome-mediated degradation.

Our research project is devoted to explore how the vesicular trafficking exploit intracellular and extracellular routes to sustain their growth and expansion. We combine unbiased profiling (genetic or proteomic) with classical biochemistry and cell biology in patient-derived GSCs to explore intracellular signaling and cell communication.

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