



Internship proposition  
**One page max**  
M2 OHNU 2026-27



Lab: CRCI2NA

Team: Extracellular Vesicles based Intercellular Communication and their Application for Therapy (EVICAT), Team 3

Name and position of the supervisor: Léa Ripoll, post-doctorante

Email of the supervisor: lea.ripoll@inserm.fr

Candidate:

Title of the internship: Extracellular vesicle-mediated signaling in ovarian cancer

Summary of the internship proposal:

Ovarian cancer is the deadliest gynecological malignancy and remains associated with poor patient survival due to metastatic dissemination and resistance to chemotherapy. Understanding how tumor cells communicate with their environment is therefore essential for identifying new mechanisms driving disease progression.

Extracellular vesicles (EVs) are small membrane-bound particles released by cells that play a central role in intercellular communication. In ovarian cancer, EVs contribute to tumor progression and metastasis but the signaling pathways they trigger in recipient cells remain incompletely understood. Among these pathways, cyclic AMP (cAMP) signaling is known to regulate key cellular processes involved in cancer aggressiveness, including migration and invasion.

The aim of this project is to investigate the role of EVs in modulating cAMP signaling in ovarian cancer cells and to determine how this signaling influences tumor cell behavior. The student will work with ovarian cancer cell lines displaying different levels of aggressiveness and will combine EV isolation and characterization with live-cell imaging approaches using genetically encoded fluorescent biosensors. Functional migration and invasion assays will also be performed to assess the biological consequences of EV-mediated signaling.

Through this interdisciplinary project, the student will gain experience in extracellular vesicle biology, cell signaling, advanced microscopy, and cancer research within a collaborative and dynamic research environment.

Option(s) linked to the project:

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|-------------------------------------|-------------------------------------|------------------------|
| <input type="checkbox"/> Hematology | <input checked="" type="checkbox"/> | Immunology-Cancerology |
| <input type="checkbox"/> Oncology   | <input type="checkbox"/>            | Nuclear Medicine       |

Option(s) linked to the profile:

- |  |   |
|--|---|
| <input type="checkbox"/> Clinical Research Profile               | <input type="checkbox"/> Data Analyst Profile |
| <input checked="" type="checkbox"/> Experimental Biology Profile |   |