



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



Lab: CRCI²NA

team: SOAP- Team 6

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Candidate:

Title of the internship: Plasma extracellular vesicles and biomarkers for patients with triple negative breast cancers

Summary of the internship proposal:

Extracellular vesicles (EVs) are cell-derived small membrane structures, transporting various molecules. They emerged as potential circulating cancer biomarkers for monitoring responses to cancer therapies. Within breast cancer, triple negative breast cancer (TNBC) accounts for about 10-15% of all breast cancer cases and is the most aggressive type, with a higher risk of metastasis and recurrence risk. In an effort to translate EV research to clinical practice, we explore a longitudinal prospective cohort of TNBC patients.

In this project, **we ambition to determine the vesiclemia (number of plasma extracellular vesicles), and detail the EV-associated protein and lipid signature in liquid biopsies from TNBC patients, alongside their therapeutic care.**

The study is organized in three aims:

- Characterization of EVs from TNBC patients and comparison with healthy donors
- Monitoring the vesiclemia and cargo signature, in regards to the response to treatments over time
- Identification of potential biomarkers and unique signature of vesicle contents for personalized patient care

Keywords: Extracellular vesicles, circulating biomarkers, TNBC cancer, monitoring treatment response

Option(s) linked to the project:

X Clinical Research Profile

Data Analyst Profile

X

xxxExperimental Biology Profile