



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



Lab: CRCI2NA

team: Team1, ITMI

Name and position of the supervisor: Fradin Delphine, CR / Pons-Tostivint Elivre, MCU-PH

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Candidate: Luc Condamine

Title of the internship: Characterization of extracellular vesicles from operated lung tumors

Summary of the internship proposal:

Lung cancer is the leading cause of cancer-related death in France. Lobectomy is the standard treatment for localized non-small-cell lung cancer. Post-operative chemotherapy is systematically indicated for tumors larger than 4cm or with mediastinal lymph node involvement. The therapeutic strategy has recently evolved, with the benefit of neoadjuvant immunotherapy combined with chemotherapy. Despite these treatments, a proportion of patients relapse in metastatic form.

Tumor cells, like other cells in the body, release extracellular vesicles (EVs) containing microRNAs (miRNAs) and numerous other components such as proteins and DNA. These EVs can be found in the vicinity of the tumor but also in all body fluids such as blood.

The aim of this study is to characterize the vesicular signatures of lung tumors that have undergone surgery with or without neoadjuvant chemoimmunotherapy. Analyses will focus on miRNAs, DNA and surface proteins. EVs will be obtained from operated lung tumors, and from plasma collected post-operatively. Patients will be followed over time to correlate the signatures with the risk of relapse.

Option(s) linked to the project:

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