



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



Lab: CIRI2NA

team: ITMI (equipe 1: Immunomodulation of the Tumor Microenvironment and Immunotherapy of Thoracic Cancers)

Name and position of the supervisor: Jean-Francois Fonteneau, chargé de recherche INSERM

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Candidate:

Title of the internship: Oncolytic Virotherapy for the treatment of thoracic cancers.

Summary of the internship proposal:

Our team studies different therapeutic approaches to induce immunogenic tumor cell death and improve the efficacy of cancer immunotherapy. One of these approaches is antitumor virotherapy, which is based on the use of oncolytic viruses (OVs). These viruses are selected or engineered to replicate specifically in tumor cells. In addition to their direct cytotoxic properties, they stimulate the antitumor immune response through different innate and adaptive mechanisms and can be further modified to vectorize therapeutic transgenes in the tumor microenvironment. We currently study different oncolytic viruses, such as an attenuated strain of measles virus, the vesicular stomatitis virus or the vaccinia virus. The aim of the internship will be to study how these viruses replicate in tumor cells and how they influence the phenotype and functions of healthy cells commonly found in the tumor microenvironment such as macrophages, fibroblasts or endothelial cells. The final objective will be to optimize these OV's in order to increase their tumor specificity, their therapeutic efficacy and their ability to reprogram the tumor microenvironment.

Option(s) linked to the project:

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