

Internship Proposition
(one page max)

Master 2 GP Immunology & ImmunIntervention (I³)
2025-2026



Lab: CRCI2NA

Team: 12: Manipulation of lymphocytes for immunotherapy

Name and position of the supervisor: Harly Christelle, CR CNRS

Email of the supervisor: christelle.harly@univ-nantes.fr

Candidate (if internship filled): none

Title of the internship: Characterization of the development and function of anti-tumor innate lymphocytes

Summary of the internship proposal: Innate lymphoid cells (ILCs) have been recently discovered, and play important immune and non-immune functions in tissues. In adult mice, there are at least two pathways for the development of ILCs, one within the bone marrow and the other extramedullary. The development and functions of bone marrow-derived ILCs are well studied. Those of extramedullary ILCs are not.

Published work suggests that at least some extramedullary ILC have unique anti-tumor functions. Through detailed characterization of the ILCs and ILC precursors that remain in mice deficient for bone marrow ILC development, we will investigate whether all extramedullary ILCs exhibit anti-tumor functions, and begin to characterize the development of these ILCs.

The results of this project will be used in future work to understand how the anti-tumor functions of ILCs are programmed during their development. Such knowledge will help design strategies to generate anti-tumor ILCs for immunotherapeutic purposes. Indeed, anti-tumor ILCs have considerable potential compared to T cells for immunotherapies against solid tumors, as ILCs act more efficiently in tissues than T cells.

The main experimental approaches used by this project are: mouse tissue processing, cell culture, flow cytometry.

Option(s) linked to the project:

- Clinical Research Profile (Recherche Clinique)
- Data Analyst Profile (Recherche et Analyse de Données Omiques)
- Experimental Biology Profile (Recherche Expérimentale)

Form to be sent by email to : gpi3@univ-nantes.fr