



Master project 2024-2025

Personal Information

Supervisor	Carlota Rubio-Perez & Aleix Prat
Email	carubio@clinic.cat
Institution	IDIBAPS - Hospital Clinic
Website	
Group	Translational Genomics and Targeted Therapeutics in Solid Tumors Lab

Project

Computational genomics

Project Title:

Breast cancer microenvironment B cell deciphering

Keywords:

single-cellRNA, TCR, BCR, Breast Cancer, oncoimmunology

Summary:

Breast cancer tumor microenvironment is an unexplored field. On many solid tumors, immune microenvironment targeting has been explored at the T cell level, showing promising results. However, no immune therapy is currently standard of care for breast cancer patients. Immune signatures, such as IGG signature, related to B cell activity, have shown a prognostic impact and may deliver new therapeutic strategies. Here, we aim to depict the immune landscape of breast cancer patients which may benefit from B cell and other immune targeted therapies. We will explore publicly available datasets as well as in-house sequenced samples at the single-cell transcriptomic, TCR and BCR level.

Expected skills:

R programming, Statistics, R/Python plotting

Possibility of funding:

No

Possible continuity with PhD:

To be discussed

Comments:

Lab location (Cellex - Hospital clinic), possibility of remote 100% with weekly meetings minimum