



## RESEARCH TOPIC MEM15

### Single-cell analysis to identify signatures of response to immunotherapy in Diffuse Large B-cell Lymphoma

#### Curriculum MEM standard

#### Research Area

Onco

#### Laboratory name

Lymphoma Translational Research Lab

#### Research Supervisor

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#### Abstract

Various novel antibody-based immunotherapies (Bispecifics, Antibody Drug Conjugates) are increasingly used to treat relapsed/refractory Diffuse Large B-cell lymphoma. However, response-predicting biomarkers and mechanisms of resistance to immunotherapy remain largely unknown. To address these issues, we designed a translational research project aimed at: (i) sequencing circulating tumor DNA to identify mutational profiles associated with resistance to immunotherapy; (ii) sequencing RNA and TCR at the single-cell level to characterize the transcriptional and immunological profiles of peripheral blood mononuclear cells (PBMC), to elucidate the contribution of immune cells to identify relevant receptor clonotypes and track their evolution during treatment. We will analyze longitudinally collected plasma and PBMC samples. This will allow us to (i) identify mutational and transcriptional signatures of response to antibody-based immunotherapy, and (ii) increase our knowledge of the mechanisms of resistance to immunotherapy.

#### Main technical approaches

ctDNA-seq and scRNA-seq

#### Scientific references

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**Type of contract**

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