



## RESEARCH TOPIC MEM17

### **Signatures of response to immunotherapy in Diffuse Large B-cell Lymphoma: a multiomics-based personalized approach Curriculum MEM**

#### **Laboratory name**

Lymphoma Translational Research Lab, IRCCS Humanitas Research Hospital

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#### **Abstract**

A variety of novel antibody-based immunotherapies (Bispecifics, Antibody Drug Conjugates) are increasingly used for the treatment of 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 multiomics-based research project, including mutational analysis of circulating tumor (ct)DNA, and high-dimensional flow cytometry, to map somatic mutations from ctDNA, and characterize the immunological profiles of peripheral blood mononuclear cells. This will allow to (i) identify biomarkers predicting response to antibody-based immunotherapy, (ii) increase our knowledge on the mechanisms of resistance to immunotherapy, (iii) improve the upfront identification of refractory patients and iv) generate innovative omics-guided, personalized therapeutic algorithms for immunotherapy delivery.

#### **Main technical approaches**

RT-PCR DNA/RNA extraction DNA-seq, RNA-seq

#### **Scientific references**

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