



### RESEARCH TOPIC MEM3

## Identification of therapeutic targets using HCC derived organoid augmented with TME components Curriculum MEM

### Laboratory name

Hepatobiliary Immunopathology Lab

### Pre-clinical Supervisor

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### Abstract

The hypothesis of this project is that Patient Derived Organoid from HCC tissue (HCC-PDO) enriched with different types of TME can be used to screen drugs for HCC.

In particular, the study aims to:

- To create HCC-PDO enriched with TME;
- Use this novel model to explore connections between TMEs and HCC drug efficacy;
- To understand the determinants of drug response using spatial and molecular approaches

The candidate will investigate drug responses using TME enriched-patient derived organoids. To understand the results, she/he will analyse the samples via spatial transcriptomic and other molecular techniques.

The project is part of a transnational collaboration involving 3 different centres (Hôpital Henri Mondor, Paris, France; Universitätsklinikum, Regensburg, Germany; National Taiwan University Hospital, Taipei, Taiwan) the candidate will also visit other collaborators when needed during the PhD programme.

### Main technical approaches

The candidate should have an excellent knowledge of the morphological and phenotypic features of HCC. In particular, she/he should be able to recognize and adequately characterize the vascular profile of these lesions.

### Scientific references

Finn RS et al. N. Engl. J. Med 2020.

Abou-Alfa G et al. N. Engl. J. Med. Evidence 2022.

Van de Wetering M et al. Cell 2015.

**Type of contract**

Scholarship of € 21.000 gross per year awarded by Istituto Clinico Humanitas. This sum is subject to IRPEF income tax and exempt from social security contributions.

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