

25 SEPT  
2025

Thursday

LECTURE

MEET & EAT \*

Light lunch provided

LIH Edison - Room: Katalin Karikó

11.00am - 12.00pm



# Harnessing tumor metabolism to overcome immunosuppression

## ABSTRACT

Anti-cancer immunotherapy has provided patients with a promising treatment. Yet, it has also unveiled that the immunosuppressive tumor microenvironment (TME) hampers the efficiency of this therapeutic option and limits its success. The concept that metabolism is able to shape the immune response has gained general acceptance. Nonetheless, little is known on how the metabolic crosstalk between different tumor compartments contributes to the harsh TME and ultimately impairs T cell fitness within the tumor. This lecture will decipher some of the metabolic changes in the TME impeding proper anti-tumor immunity. Starting from the meta-analysis of public human datasets, corroborated by metabolomics and transcriptomics data from several mouse tumors, we ranked clinically relevant and altered metabolic pathways that correlate with resistance to immunotherapy. Using a CRISPR/Cas9 platform for their functional in vivo selection, we have identified cancer cell intrinsic metabolic mediators and, indirectly, distinguished those belonging specifically to the stroma. By means of genetic tools and small molecules, we have targeted promising metabolic pathways in cancer cells and stromal cells (particularly in tumor-associated macrophages) to harness tumor immunosuppression. Finally, we went back to patient samples to assess the relevance of these metabolic networks in humans. By analyzing the metabolic crosstalk within the TME, this lecture would like to shed some light on how metabolism contributes to the immunosuppressive TME and T cell maladaptation.



## SPEAKER

**Prof Massimiliano Mazzone**

Professor; Head of the Lab of Tumor Inflammation and Angiogenesis  
VIB – KU Leuven Center for Cancer Biology

## HOST:

Luxembourg Institute of Health

## RESPONSIBLE SCIENTISTS:

Johannes Meiser and Elisabeth Letellier

**\*Please note that registration for Meet and Eat is mandatory via the following link:**

<https://lh1v-limsrvey01.lih.lu/index.php/791369?lang=en>

## Location:

### Lecture:

LIH - Edison

Room: Katalin Karikó

1A-B, rue Thomas Edison  
L-1445 Strassen

**JOIN**

Event number: 2780 195 4400

Event password: 3ARrHTtCW53