



UNIVERSITÀ
DI TRENTO

Dipartimento di
Biologia Cellulare, Computazionale e Integrata - CIBIO

19 FEBRUARY

11.30 A.M.

ROOM A208- POVO 1

SEBASTIANO GIORGETTA

MSC. CELLULAR AND MOLECULAR BIOTECHNOLOGY



- ● **FUNCTIONAL SEGREGATION OF HIF-1A**
- ● **AND AHR CONTROLS NK CELL**
- ● **RESPONSIVENESS UNDER HYPOXIA**

NK cell functions are regulated by environmental signals sensed through cellular pathways.

This study shows that hypoxia, via HIF1 α , modulates NK cell metabolism and dampens transcriptional responses to IL-12/18. However, **IFN- γ production is maintained** under hypoxia due to tryptophan sensing and AhR activation, which enhances the mTORC1-cMyc-IkB ζ pathway.

NK cells integrate signals from HIF1 α and AhR through defined transcriptional programs, allowing them to adapt their responses in complex environments like solid tumors.