



**Lunedì 29 settembre - ore 14,00**

**Aula Seminari, NICO**

## **Transcription Factor EB and the development of cardiovascular system**

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TFEB belongs to the microphthalmia family of bHLH-leucine zipper transcription factors. TFEB was originally described to be translocated in a juvenile subset of renal carcinomas and is implicated in the controls the autophagy-lysosomal pathway by recognizing a recurrent motif present in the promoter regions of more than 400 genes that participate to lysosome biogenesis (CLEAR network). TFEB overexpression increases the number of lysosomes improving the capacity to degrade complex molecules by facilitating autophagosome assembly, in particular when cells are stressed by starvation and hypoxia. The functions of Tfeb are mainly regulated by mTOR complex1 (mTORc1. mTORc1-mediated Tfeb phosphorylation occurs at the lysosomal surface and enables Tfeb binding to 14-3-3 protein, which prevents nuclear import).

In this seminar I will discuss the recent data of my Lab illustrating the in vitro and in vivo activities of Tfeb in cardiovascular system.

Ospite:

**Alessandro Vercelli**

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