

Biotechnology and Biosciences Seminars



Dipartimento di Biotecnologie e Bioscienze – UNIMIB

giovedì 17 marzo, 2022, ore 16:30, aula U3-04 / Webex

"Understanding the function in brain development of SOX2, a transcription factor whose mutation causes neurodevelopmental disease: insights from mouse conditional knock-outs"

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Abstract: SOX2 is a transcription factor conserved throughout vertebrate evolution, expressed in the central nervous system (CNS) from the earliest developmental stages. In humans, SOX2 mutation leads to a spectrum of CNS defects, including intellectual disability, motor control problems, hippocampus defects and vision defects. We reproduced in mouse the phenotypes observed in patients by deletion of the Sox2 gene in specific brain regions/developmental stages. I will discuss brain areas and cell types requiring Sox2 function and genomics approaches we used to identify SOX2 molecular targets focusing on the role of Sox2 in the visual thalamus, a brain nucleus connecting the eyes to the cerebral cortex.

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