UNIVERSITÀ DI TRENTO
Dipartimento di Biologia Cellulare, Computazionale e Integrata - CIBIO

21 APRIL

2:30 P.M.

ROOM B107 - POVO 2

EXTERNAL SEMINAR

MARTA FUMAGALLI

DEPARTMENT OF PHARMACEUTICAL SCIENCES (DISFARM) - UNIVERSITÀ DEGLI STUDI DI MILANO

STRATEGIES TARGETING OLIGODENDROCYTE PROGENITORS AND NEUROINFLAMMATION TO PROMOTE MYELIN REPAIR IN NEUROLOGICAL DISEASES

A growing body of evidence highlights that **oligodendrocyte dysfunction** and **myelin damage** are hallmarks of various **neurological disorders**. Loss of myelin integrity is not exclusive to multiple sclerosis, the prototypical demyelinating disease, but is also a key feature of **cerebral ischemia and neurodegenerative conditions** such as **Amyotrophic Lateral Sclerosis (ALS).**

By utilizing models of these pathologies, our research explores the critical role of **oligodendrocyte precursor cells (OPCs)** and neuroinflammation in myelin repair. This presentation proposes two primary therapeutic strategies: i) **reshaping the inflammatory microenvironment** in brain ischemia by leveraging **microglial extracellular vesicles (EVs)** to promote OPC maturation and improve functional outcomes; ii) targeting the **GPR17 receptor** pharmacologically in ALS to overcome **OPC maturation blocks** and limit **neuronal loss.**