



UNIVERSITÀ
DI TRENTO

Dipartimento di
Biologia Cellulare, Computazionale e Integrata - CIBIO

17 NOVEMBER

12.30 A.M.

ROOM A106 - POVO 1

ERICA TAGLIATTI

HUMANITAS CLINICAL AND RESEARCH CENTRE



● ● MICROGLIAL TREM2 CONTROLS NEURONAL ● ● BIOENERGETICS AND SYNAPTIC FUNCTION: ● ● IMPLICATIONS FOR NEURODEVELOPMENTAL/ NEURODEGENERATIVE DISEASES

DNA sequence variants in the TBK1 (TANK-Binding Kinase 1) gene associate with the neurodegenerative diseases Amyotrophic Lateral Sclerosis (ALS) and FrontoTemporal Dementia (FTD).

We have **generated and characterized mice bearing human ALS/FTD-associated TBK1 missense loss-of-function mutations**. We observed that TBK1 mutations affect distinct intracellular pathways (autophagy and the Type-I Interferon response) in specific cell types (motor neurons and glia), and at different stages of disease progression.

Our work further **highlighted a key role of the TBK1-dependent Type-I Interferon response** in driving ALS disease severity in mice and humans, and highlighted its potential as a therapeutic target to slow neurodegenerative disease progression.