

22

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UNIVERSITÀ
DI TRENTO

Dipartimento di
Biologia Cellulare,
Computazionale e Integrata - CIBIO

PhD Colloquia 2023

Protecting motor neurons from degeneration by targeting bioenergetics

 Room A104

 4.30 p.m.



TOM GILLINGWATER

University of Edinburgh

Identifying molecular pathways that govern the vulnerability of motor neurons, regardless of the degenerative insult, represents a potential route to developing neuroprotective strategies for patients with motor neuron disease (MND). I will present research from my lab that crosses different forms of MND (including ALS and SMA) which identified bioenergetics pathways as core regulators of motor neuron vulnerability to degeneration. By targeting one specific glycolytic enzyme (PGK1) using a repurposed drug, terazosin, we have shown therapeutic benefits across a range of pre-clinical models of MND. This has led to a clinical trial testing terazosin in ALS patients.