UNIMORE
UNIVERSITÀ DEGLI STUDI DI MODENA E REGGIO EMILIA

PhD Program in Molecular and Regenerative Medicine

Molecular and Regenerative Medicine Seminar Series (MRMss)

Prof. Francesco Saverio TEDESCO, MD PhD FHEA FRCPCH

Advanced in vitro modelling of neuromuscular diseases and gene therapies

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Thursday 19 March 2026, 14:30 | MO-51, aula U1.1 Via Campi 103, Modena

Francesco Saverio Tedesco is a clinician-scientist with expertise in neuromuscular diseases, muscle regeneration and disease modelling. He is Professor of Neuromuscular Biology and Regenerative Medicine at University College London, Principal Group Leader at the Francis Crick Institute and Consultant Paediatric Neurologist in the Dubowitz Neuromuscular Centre at Great Ormond Street Hospital for Children in London, UK. Prof. Tedesco graduated in Medicine and Surgery with honours at the Sapienza University of Rome (Italy) studying muscle stem cell biology at the Institute Pasteur (Paris, France); he was then awarded his PhD at the San Raffaele Scientific Institute of Milan (Italy) and completed his clinical specialty training in paediatrics and paediatric neurology in London.

Prof. Tedesco was awarded several major fellowships and research grants, including an NIHR Academic Clinical Fellowship followed by a Clinical Lectureship, a European Research Council (ERC) Starting Grant and the leadership of a large Horizon Europe consortium (10 countries; 17 institutions; 22 PIs; www.magic-horizon.eu). He received the 2015 Young Investigator Award by the European Society of Gene and Cell Therapy, the 2020 Simon Newell Investigator of the Year award by the Royal College of Paediatrics and Child Health and the 2021 MacKeith Prize by the British Paediatric Neurology Association. In 2024 he was made Fellow of the Royal College of Paediatrics and Child Health.

The Tedesco laboratory (www.tedescolab.org) harnesses the regenerative potential of muscle stem cells to create innovative models to study and develop therapies for incurable neuromuscular disorders. Their work pioneered engineering and pre-clinical translation of artificial chromosomes as gene therapy vectors (Tedesco et al., Sci Transl Med 2011; Benedetti et al., EMBO Mol Med 2018), as well as generation, differentiation, genetic correction and pre-clinical testing of human induced pluripotent stem cells (iPSCs) from patients with muscular dystrophy (Tedesco et al., Sci Transl Med 2012; Maffioletti et al., Nat Protoc 2015). More recently, they developed the first 3D human muscle model containing up to 4 distinct isogenic cell lineages capable to model disease-associated phenotypes with high resolution and fidelity, and to support testing of advanced therapies (e.g. Maffioletti et al., Cell Reports 2018; Choi et al., EMBO Mol Med 2022; Pinton et al., Nat Protoc 2023). The overall goal of the Tedesco laboratory is the translation of regenerative strategies into novel therapies to improve future outcomes for children with neuromuscular disorders.

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