



## **Giampietro Schiavo, PhD**

Professor Giampietro (Gipi) Schiavo is Deputy Director of the Department of Neuromuscular Diseases at University College London (UCL) Queen Square Institute of Neurology and head of the Molecular Neuropathobiology Laboratory at UCL. He is a UK Dementia Research Institute Investigator and the academic lead of the Alzheimer's Research UK Drug Discovery Institute at UCL.

Professor Schiavo has a long-term interest in the mechanisms of action of bacterial protein toxins, in particular tetanus and botulinum neurotoxins, and their exploitation as tools in cell biology. Using these probes, his group has clarified key steps in the mechanism of ligand entry at the neuromuscular junction and other synapses and the recruitment of ligand-receptor complexes to signaling endosomes moving along the axonal retrograde transport route. This essential transport pathway, which delivers a variety of organelles and molecular complexes to the cell body of neurons, is impaired in several nervous system pathologies, such as motor neuron disease, Alzheimer's disease, and Charcot-Marie-Tooth disease.

Dr. Schiavo and his team are identifying novel pharmacological nodes to restore axonal transport of key organelles such as signaling endosomes, mitochondria, and lysosomes in neurons both in vitro and in vivo.