Elisabetta Babetto, PhD

Hunter James Kelly Research Institute Research Assistant Professor

Dr. Elisabetta Babetto obtained her B.S. degree in Medical Biotechnology from the University of Milan, and an M.S. degree from the Mario Negri Institute in Milan, Italy in 2004. Here her interest on neurodegeneration emerged by studying the cellular toxicity associated with Amyotrophic Lateral Sclerosis. She was then recruited by Dr. Michael Coleman in Cambridge, UK, where she graduated in 2010 with a PhD in Molecular Biology funded by the Alzheimer's Research Trust.

Her graduate studies contributed to elucidate the mechanisms of action of the WldS protein, which confers a strong delay of axon degeneration after neuronal injury. As an awardee of the SfN Graduate Student Travel award in 2009, she attended the annual Neuroscience conference, where she met Prof. Aaron DiAntonio from Washington University School of Medicine, St. Louis. She joined his laboratory for her postdoctoral training in 2010, and received a fellowship from the American Italian Cancer Foundation to conduct her research on axon degeneration. She currently holds a Career Development Award from the Muscular Dystrophy Association (MDA). During this time she discovered a novel pathway regulating axon survival, mediated by the E3 ubiquitin ligase Phr1, in mouse models of acute nerve injury. She also continued her collaborations with Dr. Beirowski to characterize a new mechanism for glia-mediated support of axons.

Dr. Babetto is currently a Research Assistant Professor, at the University at Buffalo, School of Medicine and Biomedical Sciences, affiliated to the Beirowski lab at the Hunter James Kelly Research Institute.

Her interest centers around axon health, and encompasses several neurodegenerative diseases. Axon degeneration occurs in a broad spectrum of conditions and often is responsible for the overt symptoms associated with the respective condition. Thus, Dr Babetto's studies focus on common mechanisms of axon loss across different diseases. Specifically she will pursue further characterization of the already known molecular cascades implicated in this process, and unveil additional intrinsic and extrinsic signaling pathways leading to axon loss. Moreover her goal is to relate the future findings in the laboratory setting to real-life chronic neurodegeneration.