



Matthias Kneussel, Ph.D., University Medical Center Hamburg-Eppendorf, Germany. Investigating Connections between Tubulin Posttranslational Modifications, Tubular ER Network Integrity and Hereditary Spastic Paraplegia-Related Proteins in Axons. How Hereditary Spastic Paraplegia Proteins May Regulate Microtubule-ER Crosstalk for Axonal Health. The proposed project aims to investigate the role of microtubules (MTs) and posttranslational tubulin modifications (PTMs) in the regulation of tubular endoplasmic reticulum (ER) network continuity in axons.

Claire Pujol, Ph.D, CNRS researcher, Pasteur Institute, Paris, France. Molecular dissection of mitochondrial dysfunction in HSP by unbiased imaging-based pharmacological and genetic screening. Mitochondrial Side Story of HSP disease. This proposal has two interconnected aims: - Drug discovery of mitochondrial-based modulators by a pharmacological screen to provide promising HSP therapeutic compounds. - Identification of new genetic modifiers in HSPs by a genetic screen to better understand the molecular mechanisms of HSP and to try to elucidate the mechanism(s) underpinning the great disparity of phenotypic variations observed in HSP. Together, the proposed project will uncover molecular mechanism that drive mitochondrial dysfunction in HSP and will identify repurposed drugs that will restore mitochondrial and cellular health in models of HSP.

Mukesh Gautam, Ph.D, Northwestern University. "Revealing ultrastructural defects in the motor cortex of PLS patients with and without TDP-43 pathology." Revealing cellular problems in the PLS brain. Specific Aim 1: To reveal the ultrastructural defects within the motor cortex of primary lateral sclerosis (PLS) patients with and without TDP-43 pathology. Specific Aim 2: To investigate organelle-specific defects in motor cortex of PLS patients with respect to TDP-43 pathology.

For more information contact Norma Pruitt at Information@SP-Foundation.org or to provide a tax-deductible donation to the Spastic Paraplegia Foundation visit SP-Foundation.org.

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