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Title: The role of Lithium in the Treatment of Amyotrophic Lateral Sclerosis.

Abstract

Key words: Autophagy, Lithium, neurodegenerative diseases, Amyotrophic lateral sclerosis (ALS)

The accumulation of misfolded proteins, as well as altered organelles, in the neuron cells is one of the common hallmarks of many adult-onset human neurodegenerative diseases. Autophagy is an important mechanism for the cells to get rid of the misfolded proteins and damaged organelles. The impairment of different steps in autophagy can lead to different neurodegenerative diseases, including Parkinson’s disease, Huntington’s disease, and Amyotrophic lateral sclerosis (ALS). ALS, also called Lou Gehrig’s Disease, is a devastating motor neuron disease characterized by progressive muscular atrophy and fatal palsy, with no efficient cure up to date. In the paper, it is showed that Lithium, an autophagy inducer by inhibiting inositol monophosphatase, may have the effect on slowing the progression of ALS.