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Therapeutic neuroprotective agents for ALS

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Amyotrophic Lateral Sclerosis (ALS) is a fatal and rare chronic neurodegenerative disease. Multiple mechanisms proposed as responsible for ALS pathogenesis include mitochondrial dysfunction, apoptosis, oxidative stress, inflammation, glutamate excitotoxicity, and protein degradation. Because riluzole, the only Food and Drug Administration (FDA)-approved treatment, prolongs the ALS patient's life by only 3 months, new therapeutic treatments that may delay disease onset, slow progression, prolong survival, and ultimately reduce the burden of disease are urgently needed. The impact of various small pharmacological compounds targeting the proposed pathogenic mechanisms of ALS will be summarized. Furthermore, melatonin, an agonist of melatonin receptors, delays disease onset, extends lifespan, and slows progression of mSOD1G93A ALS transgenic mice will be discussed.

Biography

Xin Wang is the Director of Neuroapoptosis Drug Discovery Laboratory, Department of Neurosurgery, Brigham and Women's Hospital/Harvard Medical School. She received her PhD from Hebrew University of Jerusalem. She did her postdoctoral training at University of Michigan and Harvard Medical School. She has published about 70 peer-reviewed articles and has served as the Guest Editor, Handling Editor, and Editorial Board Member for a number of peer-reviewed journals, as well as the scientist reviewer for institutes or foundations including NIH, DOD, BSF, and others, and invited reviewer for 34 peer-reviewed journals.

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