

## NEURODEGENERATIVE ACTIVITY OF WITHAFERIN A:

Withaferin A and its derivatives have shown significant neurodegenerative activity in Pre-clinical studies and moving towards Phase-1 clinical studies on ALS and Parkinson's diseases.

One of the withaferin A derivative is under phase-I clinical trial for ALS disease with ImStar Therapeutics, (IMS-088) <http://imstartx.com/pipeline.html>)

Yumanity Therapeutics announces its first clinical candidate for Parkinson's disease (YTX-7739) <https://businesswire.com/news/home/20180905005472/en/Yumanity-Therapeutics-Announces-Clinical-Candidate-Potential-Treatment>

### Few of the key references:

1. Profiling withanolide A for therapeutic targets in neurodegenerative diseases. **Bioorganic & Medicinal Chemistry**, 2019,27, 2508-2520
2. Ameliorative Effect of *Withaferin A* on Ageing-Mediated Impairment in the Dopamine System and Its Associated Behavior of Wistar Albino Rat. **Pharmacology** 2019, 103, 114–119
3. Withaferin-A Protects the Nigral Dopamine Neuron and Recovers Motor Activity in Aged Rats. **Cells Tissues Organs** 2019, 208, 59–65
4. Withaferin A Regulates LRRK2 Levels by Interfering with the Hsp90- Cdc37 Chaperone Complex. **Current Aging Science**, 2015, 8, 259-265
5. Neuroprotection of ethanolic extract of withania somnifera and withanolide A in motor coordination on experimental Huntington's rat model. **IJPSR**, 2018, 9, 4800-4804
6. Withania somnifera (L) Dunal ameliorates neurodegeneration and cognitive impairments associated with systemic inflammation. **BMC complementary and alternative medicine**, 2019, 19, 217
7. Withaferin A inhibits nuclear factor kB dependent pro-inflammatory and stress response pathways in the astrocytes. **Neural plasticity**, 2015, 381964
8. Evaluation of the geroprotective effects of withaferin a in drosophila melanogaster. **Aging**, 2021, 13, 1817-1841
9. Withaferin A induces heat shock response and ameliorates disease progression in a mouse model of Huntington's disease. **Research Square**, 02 Mar 2021
10. Neuroprotective efficacy of withaferin A on aging mediated oxidative stress in striatum and substantia nigra of wistar albino rat. **Drug Invention Today**, 2019, 12 , 425-431
11. Withaferin A suppresses beta amyloid in APP expressing cells: studies for tat and cocaine associated neurological dysfunctions. **Front Aging Neurosci.**, . 2018, 10, 291
12. Withaferin A treatment alleviates TAR DNA- binding protein 43 pathology and improves cognitive function in a mouse model of FTL. **Neurotherapeutics** 2020. DOI 10.1007/s13311-020-00952-0
13. Implications of withaferin A in neurological disorders. **Neural Regen Res.**, .2021, 16, 304-305
14. Withaferin A induces proteasome inhibition endoplasmic reticulum stress, the heat shock response and acquisition of thermo tolerance. **Plos One** 2012, 7, e50547

**15. Withaferin A protects against spinal cord injury by inhibiting apoptosis and inflammation in mice. Pharm Biol., 2017, 55, 1171-1176**

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DEVELOPED A PATENTED (India Patent Application No. 55/CHE/2011) PROCESS TO ISOLATE BULK QUANTITIES OF WITHAFERIN A. WE CAN MEET ANY QUANTITIES OF INDUSTRIAL REQUIREMENTS WITH PURITIES >98% BY HPLC.

FOR FURTHER DETAILS PLEASE FEEL FREE TO CONTACT [xenonbiosciences@gmail.com](mailto:xenonbiosciences@gmail.com) / [withaferina@gmail.com](mailto:withaferina@gmail.com) / (OR) +91-9849601776