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## Evaluation of neuroprotective effect of silk protein, sericin in Alzheimer's disease induced rat brain

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Alzheimer's disease (AD) is a neurodegenerative disorder mainly occurs in the older people. The pathological hallmark of AD is characterized by the progressive loss of basal forebrain cholinergic neurons that innervate the hippocampus and cortex. Accumulation of extracellular amyloid- $\beta$  and intracellular tau protein in brain leads to cognitive impairments. In the present study, the rats were injected (I.P.) with D-galactose (D-gal) for 6 consecutive weeks to induce AD characters. The experimental rats were subjected to Morphometric, Learning & Memory efficiency by using Morri water maze test and to investigate neuroprotective activity of the silk Protein, Sericin on Alzheimer's induced rat. The rats were orally treated with extracted silk protein, Sericin from *B. mori*, cocoons. The biochemical changes in Ach and AChE level and Histological pathological changes were observed in selected brain regions. The results of morphometric, learning and memory efficiency, Ach and AChE level and histological changes revealed that sericin could reverse the D-Gal induced AD damage in neurons of cortex and hippocampus regions and enhances the learning and memory efficiency in AD induced rats. From all these findings, it was finally concluded that, silk protein, sericin may be used as a potential cognitive to treat Alzheimer's disease.

### Biography

Kuna Yellamma has completed her graduation from Sri Satya Sai Arts & Science College for Women, Anantapur during 1972-75 and Post-graduation in 1977 from S. V. University, Tirupati. She was the recipient of Prof. I.M. Rao Prize for obtaining First Rank in Botany in BSc; secured Second Rank in Zoology in BSc (1975), S. V. University, Tirupati; Fourth Rank in MSc Zoology. She also received S. V. University; Best Speaker prize at seminar in MSc (1977); Commonwealth Academic Staff Fellowship, UK. (1993); S. V. University, Meritorious Women Teacher award-(2000); NTR Mahila Puraskar from Andhra Pradesh State Government, (2001). She was felicitated with an Honorary Appointment to "The Research Board of Advisors" by American Biographical Institute, USA, (2001-to date); Nominated for women of the year Award – 2005 by ABI, USA; Shiksha Rattan Puraskar with certificate of Excellence by India International Friendship Society, Bangalore- (2007); S. V. U. Teacher of Excellence Award-2009; NESAFellowship Award-2010; IAO Certified Faculty Member from International Accreditation Organization, USA-2012.

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