

## EFFECT OF FOUR MEDICINAL PLANTS ON AMYLOID- $\beta$ INDUCED NEUROTOXICITY IN SHSY5Y CELLS

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### Abstract

Amyloid-beta peptide ( $A\beta$ ) is implicated in the pathogenesis of Alzheimer's disease (AD), a neurodegenerative disorder. This study was designed to determine the effect of four medicinal plants used to treat neurodegenerative diseases on  $A\beta$ -induced cell death. Cytotoxicity of the ethanol extracts of the plants was determined against SH-SY5Y (human neuroblastoma) cells which were untreated, as well as toxically induced with  $A\beta$ , using the MTT and neutral red uptake assays. Cell viability was reduced to 16% when exposed to 20  $\mu$ M  $A\beta_{25-35}$  for 72 h. The methanol extract of the roots of *Ziziphus mucronata* Willd., *Lannea schweinfurthii* (Engl.) Engl. and *Terminalia sericea* Burch. ex DC., were the least toxic to the SH-SY5Y cells at the highest concentration tested (100  $\mu$ g/ml). All four plants tested were observed to reduce the effects of  $A\beta$ -induced neuronal cell death, indicating that they may contain compounds which may be relevant in the prevention of AD progression.