

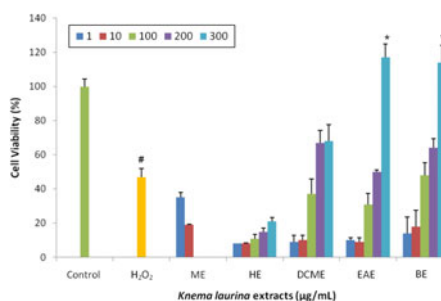
SHORT COMMUNICATION

Neuroprotective effect from stem bark extracts of *Knema laurina* against H_2O_2 - and $A\beta_{1-42}$ -induced cell death in human SH-SY5Y cells

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The stem bark extracts of *Knema laurina* inhibited the hydrogen peroxide (H_2O_2)- and aggregated amyloid β -peptide 1–42 length ($A\beta_{1-42}$)-induced cell death in differentiated SH-SY5Y cells. Exposure of 250 μ M H_2O_2 or 20 μ M $A\beta_{1-42}$ to the cells for 24 h reduced 50% of cell viability. Pretreatment of cells with ethyl acetate extract (EAE) or *n*-butanol extract (BE) at 300 μ g/mL and then exposure to H_2O_2 protected the cells against the neurotoxic effects of H_2O_2 . Besides, methanolic extract (ME) at 1 and 10 μ g/mL exerted neuroprotective effect on $A\beta_{1-42}$ -induced toxicity to the cells. These results showed that EAE, BE and ME exhibited neuroprotective activities against H_2O_2 - and $A\beta_{1-42}$ -induced cell death. Flavonoids (**3–6**) and β -sitosterol glucoside (**8**) were isolated from the EAE. Compound **1** was isolated from hexane extract, and compounds **2** and **7** were isolated from dichloromethane extract. All these observations provide the possible evidence for contribution in the neuroprotective effects.

Keywords: neuroprotective; *Knema laurina*; hydrogen peroxide; $A\beta_{1-42}$; SH-SY5Y cell; flavonoids