**Dendrobium huoshanense** can reduce hydrogen peroxide-induced toxicity in SH-SY5Y cells.

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**Introduction**

*Dendrobium huoshanense*, an herb of Orchidaceae family, has long been used as traditional Chinese medicine for the protection of eye, stomach and liver. A recent study has shown that *Dendrobium huoshanense* can help prevent selenium-induced liver injury and fibrosis in rats. Moreover, this herb has been found to scavenge free oxygen radicals and inhibit nitric oxide generation, exerting antioxidative functions.

The objective of the present study is to investigate the neuroprotective effects of *Dendrobium huoshanense* against oxidative stress which has been implicated in many neurological diseases such as ischemia, Alzheimer’s disease and Parkinson’s disease.

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**Methodology**

Cells: Undifferentiated SH-SY5Y cells

Pre-treatment: Undifferentiated SH-SY5Y cells in DMEM supplemented with 5% FBS were pre-treated with chemically extracted *Dendrobium huoshanense* for 24 hours.

Treatment: After removing *Dendrobium huoshanense* from the cells, they were treated with hydrogen peroxide at 400 μM in DMEM with 2% FBS for 18 hours.

Cytotoxicity test: Measurement of LDH release

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**Results**

Cytotoxicity Study of *Dendrobium huoshanense* (DH) in SH-SY5Y cells

Effect of *Dendrobium huoshanense* (DH) on cell death of SH-SY5Y cells induced by H₂O₂

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**Discussion**

Results indicated that pretreatment of *Dendrobium huoshanense* can reduce the release of lactate dehydrogenase from SH-SY5Y cells in hydrogen peroxide-induced toxicity, implicating that *Dendrobium huoshanense* may help in neuroprotection.

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