

**Effect of *Cynanchum wilfordii* Hemesley Extract
on antioxidative enzyme in rat PC 12 pheochromocytoma.**

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Reactive oxygen species are highly reactive oxidant molecules and react with cellular components, causing oxidative damages. These damages may play a significant role in the causation of several chronic diseases. Antioxidative defence systems are present in the body to protect cells from oxidative damages. The first line of defence include dietary antioxidants and enzymes such as superoxide dismutase. *Cynanchum wilfordii* Hemesley has been used for centuries as a tonic nutraceutical in China and Korea. This plant has been known to possess an advantage of anti-aging effect. Therefore the objective of this study was to screen antioxidative activity of *Cynanchum wilfordii* Hemesley extract by evaluating their effects on lipid peroxide formation, and the MnSOD activity and expression in PC12 cells. Cells treated 100ppm of extracts did not decrease cellular MDA(malondialdehyde) contents, although cells treated with buthanol and chloroform extracts showed slightly decreased level of MDA. MnSOD activity was significantly higher when cells were treated with chloroform extracts for 72hrs. However, level of MnSOD protein were lower in cells treated with chloroform extract. These results suggest that chloroform extract of *Cynanchum wilfordii* Hemesley possibly inactivate reactive oxygen species, and thereby reserve SOD activity maintain protein levels of MnSOD within these cells.

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