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## *Clematis mandshurica* extract ameliorates scopolamine-induced memory impairment in mice

Woo Seung Yang<sup>1</sup>, Jin Bae Weon<sup>1</sup>, Gahee Ryu<sup>1</sup> and Choong Je Ma  
Kangwon National University, Korea

*Clematis mandshurica* (*C. mandshurica*) is a traditional crude drug for treatment of urethritis, carbuncles and carcinoma. The objective of this study was to confirm the cognitive enhancing effect *C. mandshurica* using two behavioral tests, Morris water maze test and passive avoidance test. 50, 100 and 200 mg/kg of *C. mandshurica* extract were administered to mice. We also investigated acetylcholinesterase (AChE) activity and brain-derived neurotrophic factor (BDNF) expression and cAMP response element-binding protein (CREB) phosphorylation in scopolamine-induced memory deficit on mice to determine possible mechanism. The results revealed that *C. mandshurica* attenuated learning and memory impairment by scopolamine. *C. mandshurica* also inhibited acetylcholinesterase level in hippocampus of scopolamine-injected mice. Moreover, *C. mandshurica* increased BDNF and p-CREB expression in hippocampus. These results indicated that *C. mandshurica* improved memory impairment through AChE inhibition and BDNF and p-CREB expression and suggesting that *C. mandshurica* could be a useful therapeutic agent for the prevention or treatment of Alzheimer's disease.

### Biography

Woo Seung Yang has done his Master's degree in Department of Medical Biomaterials Engineering, College of Biomedical Sciences, Kangwon National University, Korea. His has done his Major in Pharmacognosy.

diddntmd11@gmail.com

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