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Aruncus dioicus var. kamtschaticus ameliorates trimethyltin-induced neuro-degeneration in ICR mice**Su Bin Park, Jin Young Kang, Jong Min Kim, Seon Kyeong Park, Seul Ki Yoo, Hye Ju Han and Ho Jin Heo**
Gyeongsang National University, Republic of Korea

To estimate physiological effect of ethylacetate fraction of *Aruncus dioicus* var. *kamtschaticus* (EFAD) on cognitive dysfunction, *in vivo* and *ex vivo* test were conducted in neurodegenerative animal model. The animal model is established as injecting trimethyltin (TMT) (7.15 g/kg of body weight, intra-peritoneal injection) in Institute of Cancer Research (ICR) mice. EFAD showed the excellent ameliorating effects on reduced spatial memory ability, short and long term memory deficits in the mice through *in vivo* tests such as the Y-maze, passive avoidance and Morris water maze test. After the behavioral tests, to ascertain the protective effects of EFAD on the cholinergic and antioxidant system, a series of biochemical indicators were measured in brain tissue of mice. Acetylcholine (ACh) as a neurotransmitter and acetylcholinesterase (AChE) as an enzyme that catalyzes the breakdown ACh were measured. EFAD has been proved to have the significant effects on cholinergic system by increasing ACh levels and decreasing AChE activity. In addition, EFAD improve the antioxidant system by diminishing malondialdehyde (MDA), an indicator of lipid peroxide, and elevating antioxidant such as contents of reduced glutathione (GSH) and superoxide dismutase (SOD).

Biography

Su Bin Park is pursuing her Master's degree from Gyeongsang National University, Division of Agriculture and Life Science. She has published two domestic papers associated with functional foods.

tbsk5670@naver.com

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