P-19

Stimulatory Effect of *Rubus coreanus* Miq. on the Proliferation and Differentiation in MC3T3-E1 Osteoblasts

Eun-Mi Choi*, Sung-Ja Koo

Department of Food & Nutrition, Kyung-hee University, Seoul Korea

Rubus coreanus Miq., an herbal medicine known for its effect to purify blood quality and improve circulation, frequently appears as the main ingredient in prescriptions for bone injuries. Currently, how pharmacologically it contributes to the reformation of bone is unclear. In this study, we report the effects of *Rubus coreanus* on osteoblast proliferation and differentiation using MC3T3-E1 cells, a mouse calvaria osteoblast-like cell line. *Rubus coreanus* significantly enhanced cell proliferation at the concentration of 0.004-0.25 mg/ml ($p<0.05$). Alkaline phosphatase activity and collagen synthesis were also increased by ethanol extract of *Rubus coreanus,* significantly ($p<0.05$). This increase was completely blocked by the presence of cycloheximide (10^{-6} M), an inhibitor of protein synthesis. The present results support the view that *Rubus coreanus* has a direct specific proliferative effect on osteoblastic cells *in vitro* and that this effect is dependent on protein synthesis. In conclusion, *Rubus coreanus* can stimulate osteoblastic activity and such agent may represent new pharmacological tools for the treatment of osteoporosis.

* 담당자 : 최은미

* Tel : 02-961-0709

* Fax : 02-968-0260

* E-mail : cheunmi@hanmail.net