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Induction of apoptosis by Korean Mu (*Raphanus sativus* L. *Chongwoun*) extract in vascular smooth muscle cells: anti-atherosclerosis activity

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Korean Mu (*Raphanus sativus* L. *Chongwoun*) extract has been used as antioxidants to prevent apoptosis in lymphocytes, neurons, and vascular endothelial cells (?). We report here that *Raphanus sativus* L. *Chongwoun* extract induce apoptosis in rat aortic smooth muscle cells. In rat aortic smooth muscle cells, PDTC induced cell shrinkage and apoptotic cell death consistent with apoptosis. Bcl-2 is one of the well-defined anti-apoptotic proteins. Levels of Bcl-2 were decreased in high-concentration of *Raphanus sativus* L. *Chongwoun* extract-treated vascular smooth muscle cells at 24 hrs. The apoptosis in *Raphanus sativus* L. *Chongwoun* extract -treated vascular smooth muscle cells were dependent on Bcl-2 level. This study suggests that the use of *Raphanus sativus* L. *Chongwoun* extract to induce apoptosis in vascular smooth muscle cells may help prevent their proliferation in atherosclerotic lesions.

Key words : *Raphanus sativus* L. *Chongwoun* extract, VSMC, apoptosis, Bcl-2