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### Effects of Fermented Traditional Wine by using Mycelium of *Phellinus linteus* on the Expression of Inflammation-Related Proteins in HepG2 cells

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It was examined that the effect of fermented traditional wine made by using mycelium of *Phellinus linteus* on the expression of inflammation-related proteins in HepG2 cells. HepG2 cells were incubated with or without extract of traditional wine (ETMP), then analyzed by microscopic observation, reverse transcription polymerase chain reaction (RT-PCR) and Western blot. The results of RT-PCR and Western blot analyses showed that the level of inducible nitric oxide synthase (iNOS), cyclooxygenase (COX)-2 and tumor necrosis factor (TNF)- $\alpha$  was induced by LPS, but the treatment of ETMP inhibited the expression of these proteins and its mRNAs. Besides, the results of Western blot analyses showed that the expression of nuclear factor- $\kappa$ Bp65 and inhibitory- $\kappa$ B $\alpha$  were also slightly affected by ETMP treatment. These results suggest that ETMP alleviate the expression of inflammation-related protein expressions and thus may be used as a functional alcoholic beverage (This Study was supported by Technology Development Program of the Ministry of Agriculture and Forestry, Republic of Korea).

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### Up-regulation of matrix metalloproteinase-9 in smooth muscle cell undergoing death

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This study investigated whether matrix metalloproteinases (MMPs) can be modified in apoptotic smooth muscle cell (SMC) using the SMC that undergoes apoptotic death by expressing Fas-associated death domain containing protein (FADD) when they are grown without tetracycline in culture medium. In the absence of tetracycline FADD-SMC lost adherence and showed the fragmentation of the nuclei. In proportion to duration of tetracycline removal, phosphorylated form of p38 MAPK and of ERK increased, whereas phosphorylation of protein kinase B (PKB) was not changed very much in response to tetracycline. The levels of cyclin A and cyclin D were also decreased in a time dependent manner. Up-regulation of MMP-9 expression and activity was observed when the SMC were grown without tetracycline. Immunoreactivity of MMP-9 was detected from both attached and floating FADD-SMCs grown without tetracycline. An inhibitor of MAPK kinase, PD098059, and an inhibitor of p38 MAPK, SB203580, inhibited up-regulation of MMP-9. Treatment of the SMC with a synthetic MMP inhibitor, BB94, attenuated the SMC death occurring in the absence of tetracycline. These results indicate that SMC undergoing death is able to up-regulate MMP-9 and that the enzyme can affect cell viability.