28AB-ISMS11 **Anti Tumor Activity of Geraniin in Osteosarcoma Cells**

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p53 is a tumor suppressor gene that participates in the cell cycle checkpoint signaling pathways. The function and protein expression of p53 are usually suppressed by binding of Mdm2, an ubiquitin E3 ligase. Inhibition of the p53-Mdm2 binding induces cell cycle arrest and cell death. Because p53 regulates the survival of tumor cells, the inhibition of p53-Mdm2 binding is an attractive target for anti-tumor drugs.

We established a p53-Mdm2 interaction assay *in vitro* and searched for a new p53-Mdm2 binding inhibitor among natural products. As a result, we identified geraniin, a member of ellagitannins. Geraniin inhibited the p53-Mdm2 interaction and increased the protein expression and transcription activity of p53 *in vitro*. Geraniin also induced p53-dependent cell death in human glioblastoma LNZTA3 cells. In a xenographt model, geraniin suppressed tumor growth of osteosarcoma, the combination of geraniin and doxorubicin showed higher inhibition of the osteosarcoma growth than each single agent. Therefore geraniin may be effective in the treatment of osteosarcoma.