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식물자원의 항염증, 항암활성 평가 및 이를 이용한 데이터베이스 구축

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The inhibitory effect of native plant extracts on inflammation, angiogenesis and osteoclastogenesis

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Objectives To establish the library on biological activities of Korean plant extracts, we investigated the effects on inflammation, angiogenesis and osteoclastogenesis.
Materials and Methods To assess the anti-inflammatory activity, we investigated the effect of extracts on nitric oxide (NO) production in mouse macrophage cell line, RAW264.7 cells treated with lipopolyssarcharide (LPS). We also examined the effects on vascular endothelial growth factor (VEGF)-induced proliferation in human umbilical vein endothelial cells, HUVECs by MTT (3-(4,5-dimethylthiazol-2-yl) -2,5-diphenyltetrazolium bromide) assay to evaluate anti-angiogenic activity. To determine osteoclasts inhibition, receptor activator of nuclear factor kappa B ligand (RANKL)-induced osteoclast formation was measured using the tartrate-resistent acid phosphatase (TRAP) staining method.
Results 7 extracts including *Euphorbia pekinensis* RUPR. inhibited NO production in LPS-activated RAW264.7 cells. VEGF-induced cell proliferation of HUVECs was reduced by 9 extracts including *Anethum graveolens* L. and *Sophora flavescens* Aiton. 11 extracts including *Forsythia viridissima* LINDLEY reduced osteoclast formation on bone-marrow macrophages(BMMs). These extracts did not affect cell viability at the effective doses.

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