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Cell Proliferation Effects of *Acanthopanax* Cortex Extracts on the Osteoblast-like Cell Lines, MG-63 and Saos-2

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In the Oriental Medicine, a *Acanthopanax sessiliflorum* has been traditionally used to treat several diseases such as autoimmune disease, cancer, hypertension, and bone diseases. In this study, the effects of *Acanthopanax* cortex on the proliferation of osteoblast-like cell line, MG-63 and Saos-2 were investigated. *Acanthopanax* cortex was extracted with 70% methanol. The extract of *Acanthopanax* cortex was fractionated sequentially by the n-hexane, chloroform, ethylacetate, butanol and aqueous fractions. The proliferation of the cells was tested using MTT assay, measuring the activity of alkaline phosphatase (ALP) and evaluating the collagen synthesis by the [³H]proline incorporation. The results of MTT assay showed that the cell proliferation of the MG-63 and Saos-2 cells was the highest in the chloroform fraction (150% of control) and ethylacetate fraction (136% of control), respectively. The activities of ALP on the Saos-2 was the highest in the butanol fraction (143% of control). The collagen synthesis on the MG-63 was also the highest in the butanol fraction (113% of control). From all of these results, 70% methanol extract of *Acanthopanax* cortex might have an beneficial effect on the formation of bone.

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Cytotoxicity and Quinone Reductase Induced Effects of Leek (*Allium tuberosum*) on Human Cancer Cells

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The anticarcinogenic effects of various food components on human cancer cells have received much attention in recent years. The mechanism of anticarcinogens in food materials on cancer cells have rarely been investigated. This study was performed to investigate the effects on cytotoxicity and quinone reductase (QR) induced activity of *Allium tuberosum* (AT) on the human cancer cells. The six partition layers which are methanol (ATM), hexane (ATMH), ethylether (ATMEE), ethylacetate (ATMEA), butanol (ATMB) and aqueous (ATMA) partition layers of *Allium tuberosum* were screened for their cytotoxicity effect on HepG2, MCF-7, HeLa and SK-N-MC cells by the MTT assay. Among various partition layers, the ATMEE partition layer of the *Allium tuberosum* was showed the strongest cytotoxic effect at 150 μ g/ml which resulted ~95% on HepG2, HeLa, MCF-7, SK-N-MC cell lines. The ATMEA also was showed significant cytotoxic effect on HepG2, SK-N-MC cell lines. The induction of phase II enzyme including quinone reductase (QR) is a major mechanism of whereby a large group of heterogeneous compounds prevent the toxic, mutagen and meoplastic effects of carcinogen. The ATMB and ATMH was the highest induction activity of quinone reductase (QR) on HepG2 cells among the other partition layers. The QR activity on HepG2 cells, grown in the presence of ATMB and ATMH at the concentration of 50 μ g/ml, was 3.9 and 1.7 times more effective compared to the control value of 1.0, respectively. Based on these results, the ethylether (ATMEE) and butanol (ATMB) partition layer of the *Allium tuberosum* may have that poentially useful cancer chemoprevention materials on the human cancer cells.