

Screening analysis of cancer cell cytotoxicity of plants growing in Mongolia for HepG2 cell line

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Medicinal plants are richest and valuable resource for drug development for cancer chemo therapy. In the framework of this project, we have identified anti-proliferative properties of plant extracts, which might have promising anticancer activity by traditional knowledge. Total of 68 different extracts isolated from 57 plant species belonging to 27 plant families were subjected for their anti-proliferative effects by WST assay using HepG2 cell line. WST assay screening showed that the extracts isolated from *Artemisia sieversiana* (90,68%-inhibition rate as percent), *Artemisa Annua* (44,87%), *Artemisa rutifolia* (69,63%), *Astrothamnus palifolius* (75,86%), *Cahmaenerion angustifolium* (50,38%), *Lophanthus krylovi* (59,69%), *Juniperus sibirica* (77,22%) , *Paeonia anomala* (84,78), *Panzeria Lanata* (87,7), *Potentilla viscosa* (40,08%) *Rubus sachalinensis* (87,05%) have highest inhibition rate of cell proliferation activity. In contrast, extracts isolated from some plants including of *Allium bidentatum*, *Echinops latifolius*, *Stellaria dichotoma* showed highest stimulation effect on cell proliferation activity. Pure chemical fractions were isolated from those biological active extracts and subjected to NMRI analysis for molecular structure identification. We found 2 substances, 2-hydroxy-6-methoxy-4-*O*-(6'-*O*- α -L-arabinofuranosyl- β -D-glucopyranosyl and 3,3'-di-*O*-methyl-4-*O*-3''-*O*-galloyl- β -D-glucopyranosyl, which are not informed before in science. Also these substances were tested for their anti-proliferative activity on HepG2 cell line.