Ⅱ-10

고로쇠 및 우산고로쇠의 부위별 항암활성 비교

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Comparison of Anticancer Activities according to different parts of *Acer mono* and *A. okamotoanum*

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Objective

The purpose of this study was to compare anticancer activities of the extracts associated with ultrasonification process according to the parts of *Acer mono* and *A. okamotoanum*

Materials and Methods

Barks and woods of the *Acer mono* and *A. okamotoanum* extracted by ethyl alcohol at 60℃ for 24 hours after conducted ultrasonification process for 30min. Then, the extracts were preserved in freezer before used

Results

1. The cytotoxicity of the extracts on human lung cell(HEL299) was showed in the range of 9.41 ~ 18.95% on the all extracts Bark and wood of *A. okamotoanum* and *Acer mono*. *Acer okamotoanum* extract showed the lowest cytotoxicity on normal human cell line.
2. *Acer okamotoanum* extracts at highest concentration of 1.0mg/㎖ inhibited 76.95% of A549 cell growth and its selectivity was 5.37.

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3. Generally, anticancer activities on AGS, Hep3B and MCF-7 cell were increased of treatment.
4. Bark of A. okamotoanum showed higher anticancer activity than wood extracts, and *Acer okamotoanum* had better anticancer activity than *Acer mono*.
5. Ultrasonification extraction process could yield higher amounts of biology activities components without heat damage through destruction of cell walls as well as new active compounds.

시험성적

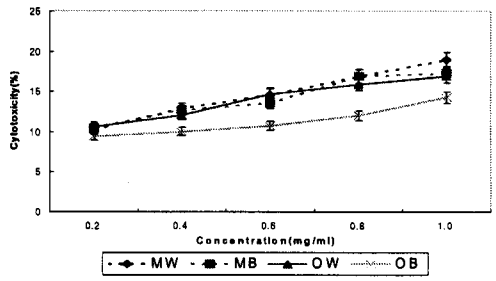

Fig.1. Cytotoxity of the wood, bark from *A. mono* and *A. okamotoanum* on normal cell line, HEL299. Mean values±S.D. from three separate experiments are shown (MW, wood of *Acer mono*; MB, bark of *Acer mono*; OW, wood of *Acer okamotoanum*; OB, bark of *Acer okamotoanum*).

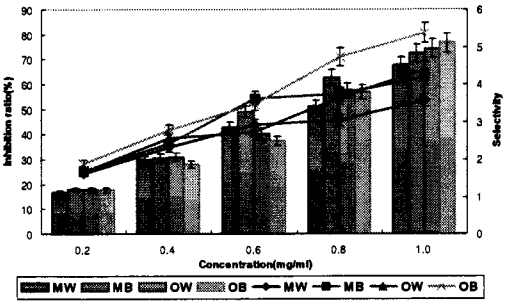

Fig.2. Inhibition ratio of growth A549(barchart,%) and selectivity(linechart) in adding the wood, bark of *A. mono* and *A. okamotoanum*. Mean values±S.D. from three separate experiments are shown (MW, wood of *Acer mono*; MB, bark of *Acer mono*; OW, wood of *Acer okamotoanum*; OB, bark of *Acer okamotoanum*).

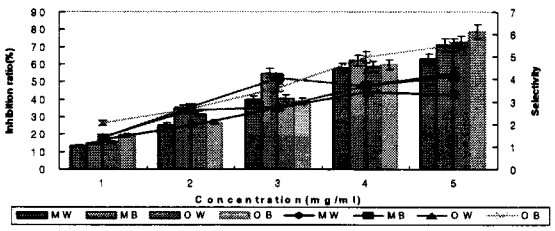

Fig.3. Inhibition ratio of growth AGS(barchart,%) and selectivity(linechart) in adding the wood, bark of *A. mono* and *A. okamotoanum*. Mean values±S.D. from three separate experiments are shown (MW, wood of *Acer mono*; MB, bark of *Acer mono*; OW, wood of *Acer okamotoanum*; OB, bark of *Acer okamotoanum*).

Table1. Inhibition ratio of growth MCF-7, Hep3B and selectivity in adding the wood, bark of *A. mono* and *A. okamotoanum*. Mean values±S.D. from three separate experiments are shown (MW, wood of *Acer mono*; MB, bark of *Acer mono*; OW, wood of *Acer okamotoanum*; OB, bark of *Acer okamotoanum*).

Sample	Concentration (mg/ml)	MCF-7 Inhibition ratio (%)	MCF-7 Selectivity	Hep3B Inhibition ratio (%)	Hep3B Selectivity
MW	0.2	12.98±1.2	1.3	13.25±1.8	1.3
	0.4	28.95±2.8	2.2	26.25±3.6	2.4
	0.6	32.71±3.5	2.2	37.52±2.2	2.6
	0.8	47.52±2.7	2.8	48.55±1.1	2.8
	1.0	52.98±1.1	3.1	56.99±2.0	3.1
MB	0.2	12.95±3.3	1.2	13.84±2.7	1.3
	0.4	27.14±1.7	2.1	26.66±1.4	2.3
	0.6	32.17±2.0	2.4	36.98±3.6	3.0
	0.8	42.64±2.5	2.5	49.22±1.7	3.0
	1.0	58.95±1.3	3.4	56.22±2.5	3.3
OW	0.2	13.36±2.5	1.3	13.68±4.1	1.3
	0.4	20.44±2.0	1.7	20.16±3.5	1.7
	0.6	31.22±3.6	2.1	31.54±1.2	2.2
	0.8	41.17±2.1	2.6	48.32±2.7	3.0
	1.0	59.68±4.5	3.5	60.22±3.2	3.6
OB	0.2	13.66±1.9	1.5	13.99±1.6	1.5
	0.4	20.74±6.3	2.1	24.77±2.1	2.5
	0.6	32.14±2.3	3.0	39.71±3.6	3.6
	0.8	42.17±2.2	3.5	41.22±2.2	3.4
	1.0	60.22±1.4	4.2	64.55±1.6	4.5