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Appendicies

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Anticell Lines Cytotoxicity Test

Table 1 The results of cytotoxicity test against Leukemia carcinoma (HL-60) cell line of some Compositae weed crude extracts

Plant	Solvent	Concentration ($\mu\text{g/mL}$)			Estimation
		1	10	100	
<i>E. adenophorum</i>	Hexane	-44.03	-3.33	77.52	+
	EtOH	-18.30	4.96	42.50	-
	CH ₂ Cl ₂	-20.57	5.79	80.86	+
<i>E. odoratum</i>	BuOH	-0.07	1.12	40.21	-
<i>A. conyzoides</i>	Hexane	-17.85	6.39	11.31	-
	EtOH	16.99	14.25	29.47	-
<i>S. africanus</i>	EtOH	3.43	40.10	79.37	+

Table 2 The results of cytotoxicity test against Gastric carcinoma (BGC-823) cell line of some Compositae weed crude extracts

Plant	Solvent	Concentration ($\mu\text{g/mL}$)			Estimation
		1	10	100	
<i>E. adenophorum</i>	Hexane	9.79	9.71	20.27	-
	EtOH	9.53	21.40	74.01	+
	CH ₂ Cl ₂	-1.58	13.45	88.41	+
<i>E. odoratum</i>	BuOH	-4.76	0.25	44.35	-
<i>A. conyzoides</i>	EtOH	-2.17	-3.10	65.05	+
<i>S. africanus</i>	EtOH	-0.83	-4.98	-	-

Table 3 The results of cytotoxicity test against Erythroleukemia carcinoma (K-562) cell line of some Compositae weed crude extracts

Extract	Concentration ($\mu\text{g/mL}$)			Estimation
	1	10	100	
<i>E. adenophorum</i> - Hexane	11.62	18.64	80.70	+
EtOH	-20.17	-18.72	-8.77	-
<i>E. odoratum</i> - BuOH	13.59	19.73	30.04	-
<i>A. conyzoides</i> - Hexane	3.50	2.63	48.46	-
EtOH	14.69	34.64	22.14	-

Table 4 The results of cytotoxicity test against Nasopharyngeal carcinoma (KB) cell line of some Compositae weed crude extracts

Extract	Concentration ($\mu\text{g/mL}$)			Estimation
	1	10	100	
<i>E. adenophorum</i> - Hexane	8.93	20.01	23.07	-
EtOH	-2.79	-1.86	54.74	+
<i>E. odoratum</i> - BuOH	-4.46	-6.56	2.35	-
<i>A. conyzoides</i> - EtOH	13.75	47.37	62.56	+
<i>S. africanus</i> - EtOH	1.08	3.23	48.79	-

Table 5 The results of cytotoxicity test against Bladder carcinoma (BIU) cell line
E. adenophorum crude extract

Extract	Concentration ($\mu\text{g/mL}$)			Estimation
	1	10	100	
Hexane	22.16	36.97	41.29	-
EtOH	29.29	36.98	56.48	++
CH ₂ Cl ₂	8.45	16.74	34.48	-
EtOAc	2.99	19.86	39.93	-
BuOH	19.38	19.88	22.37	+

Table 6 The results of cytotoxicity test against Bladder carcinoma (BIU) cell line of
some Compositae weed crude extracts

Extract	Concentration ($\mu\text{g/mL}$)			Estimation
	1	10	100	
<i>E. adenophorum</i> - Hexane	22.16	36.97	41.29	-
<i>E. odoratum</i> - BuOH	-5.38	-5.13	55.58	+
<i>A. conyzoides</i> - Hexane	33.53	38.17	53.61	+
EtOH	13.75	47.37	62.56	+

Table 7 The results of cytotoxicity test against Erythroleukemia carcinoma (K-562) cell line of *E. adenophorum* crude extract

Extract	Concentration ($\mu\text{g/mL}$)			Estimation
	1	10	100	
Hexane	11.62	18.64	80.70	+
EtOH	-20.17	-18.72	-8.77	-
CH ₂ Cl ₂	4.12	-1.31	35.08	-
EtOAc	11.97	16.66	52.26	+
BuOH	8.11	-8.33	21.27	-

Table 8 The results of cytotoxicity test against Colon carcinoma (HCT-8) cell line of *E. adenophorum* crude extract

Extract	Concentration ($\mu\text{g/mL}$)			Estimation
	1	10	100	
Hexane	3.51	2.31	1.66	-
EtOH	5.81	2.08	88.14	+
CH ₂ Cl ₂	4.82	3.40	89.13	+

Table 9 The results of cytotoxicity test against Nasopharyngeal carcinoma (KB) cell line of *E. adenophorum* crude extract

Extract	Concentration ($\mu\text{g/mL}$)			Estimation
	1	10	100	
Hexane	8.93	20.01	23.07	-
EtOH	-2.79	-1.86	54.74	+
EtOAc	3.66	5.05	13.03	-

Table 10 The results of cytotoxicity test against Gastric carcinoma (BGC-823) cell line of *E. adenophorum* crude extract

Extract	Concentration ($\mu\text{g/mL}$)			Estimation
	1	10	100	
Hexane	9.79	9.71	20.27	-
EtOH	9.53	21.40	74.01	+
CH ₂ Cl ₂	-4.98	-5.87	40.27	-
EtOAc	-14.55	-11.70	50.88	+

Table 11 The results of cytotoxicity test against Leukemia carcinoma (HL-60) cell line of *E. adenophorum* crude extract

Extract	Concentration ($\mu\text{g/mL}$)			Estimation
	1	10	100	
Hexane	-16.23	13.85	53.01	+
EtOH	-9.03	-4.97	16.13	-
CH ₂ Cl ₂	34.55	40.84	83.71	++
EtOAc	32.77	39.82	63.16	+
BuOH	19.38	19.88	22.37	-

Table 12 The results of cytotoxicity test against Hepatocellular carcinoma (Bel-7402) cell line of *E. adenophorum* crude extract

Extract	Concentration ($\mu\text{g/mL}$)			Estimation
	1	10	100	
Hexane	4.69	4.07	3.27	-
EtOH	3.78	10.91	67.07	+
CH ₂ Cl ₂	7.31	12.06	87.67	+

Table 13 The results of cytotoxicity test against Leukemia carcinoma (HL-60) cell line of *E. adenophorum* dichloromethane crude extract

Extract	Concentration ($\mu\text{g/ml}$)			Estimation
	1	10	100	
III A	-5.89	-7.96	-9.82	-
III B	-2.17	6.72	43.32	-
III C	-8.06	-3.10	77.35	-
III F	-12.30	-7.54	64.42	+

Table 14 The results of cytotoxicity test against Colon carcinoma (HCT-8) cell line of *E. adenophorum* dichloromethane crude extract

Extract	Concentration ($\mu\text{g/ml}$)			Estimation
	1	10	100	
III A	-13.94	6.69	39.51	-
III B	18.11	15.58	92.86	+
III C	19.42	17.56	95.86	+
III F	11.85	16.02	81.77	+

Table 15 The results of cytotoxicity test against Hepatocellular carcinoma (Bel-7402) cell line of *E. adenophorum* dichloromethane crude extract

Extract	Concentration ($\mu\text{g/ml}$)			Estimation
	1	10	100	
III A	8.98	12.32	60.26	+
III B	13.79	17.07	86.20	+
III C	7.25	20.73	66.30	+
III F	7.55	11.26	69.14	+

Table 16 The results of cytotoxicity test against Gastric carcinoma (BGC-823)
cell line of *E. adenophorum* dichloromethane crude extract

Extract	Concentration ($\mu\text{g/ml}$)			Estimation
	1	10	100	
IIIA	8.03	26.26	59.71	+
IIIB	7.85	21.21	67.66	+
IIIC	14.61	-15.48	63.03	+
IIIF	10.79	24.53	66.08	+

Table 17 The results of cytotoxicity test against Leukemiar carcinoma (HL-60)
cell line of *E. adenophorum* ethyl acetate crude extract

Extract	Concentration ($\mu\text{g/mL}$)			Estimation
	1	10	100	
IVA	-4.02	10.06	71.58	+
IVB	-10.96	13.64	9.84	-
IVC	-46.53	-15.26	49.76	-
IVD	-9.39	12.52	22.59	-
IVE	-1.56	44.51	41.61	-
IVF	14.59	29.53	64.59	+

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Table 18 The results of cytotoxicity test against Nasopharyngeal carcinoma (KB) cell line of *E. adenophorum* ethyl acetate crude extract

Extract	Concentration ($\mu\text{g/ml}$)			Estimation
	1	10	100	
IVA	8.20	27.02	97.42	+
IVB	4.85	19.89	49.61	-
IVC	16.89	16.29	76.45	+
IVD	19.17	17.49	46.97	-
IVE	7.01	17.67	47.99	-
IVF	18.29	20.49	48.41	-

Table 19 The results of cytotoxicity test against Colon carcinoma (HCT-8) cell line of *E. adenophorum* ethyl acetate crude extract

Extract	Concentration ($\mu\text{g/ml}$)			Estimation
	1	10	100	
IVA	0.78	2.21	95.61	+
IVB	2.96	93.81	92.01	++
IVC	0.18	2.92	92.72	+
IVD	-0.93	-1.12	92.49	+
IVE	-1.65	-1.35	91.14	+
IVF	-2.10	-1.01	94.33	+

Table 20 The results of cytotoxicity test against Hepatocellular carcinoma (Bel-7402) cell line of *E. adenophorum* ethyl acetate crude extract

Extract	Concentration ($\mu\text{g/ml}$)			Estimation
	1	10	100	
IVA	3.77	1.65	93.90	+
IVB	-3.54	59.16	79.97	++
IVC	-2.42	-1.53	85.95	+
IVD	-5.78	-1.33	85.32	+
IVE	-6.68	-2.00	85.12	+
IVF	-6.09	-2.51	84.97	+

Table 21 The results of cytotoxicity test against Gastric carcinoma (BGC-823) cell line of *E. adenophorum* ethyl acetate crude extract

Extract	Concentration ($\mu\text{g/ml}$)			Estimation
	1	10	100	
IVA	9.02	13.64	71.54	+
IVB	11.64	13.18	36.16	-
IVC	13.95	7.71	66.07	+
IVD	13.56	7.01	40.24	-
IVE	19.19	12.25	34.46	-
IVF	17.11	15.80	38.47	-

Note : The results suggested by Beijing Medical University, Beijing, China

++ good

+ fair

- no activity

VITA

Miss Suttijit Sriwatcharakul was born on March 17, 1973 in Bangkok, Thailand. She received the Bachelor Degree of Science(Agriculture) at Kasetsart University in 1995. Since 1995, she has been a graduate student studying Biotechnology in Chulalongkorn University. She was supported by a research grant for her Master Degree's thesis from the graduate school, Chulalongkorn University.



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