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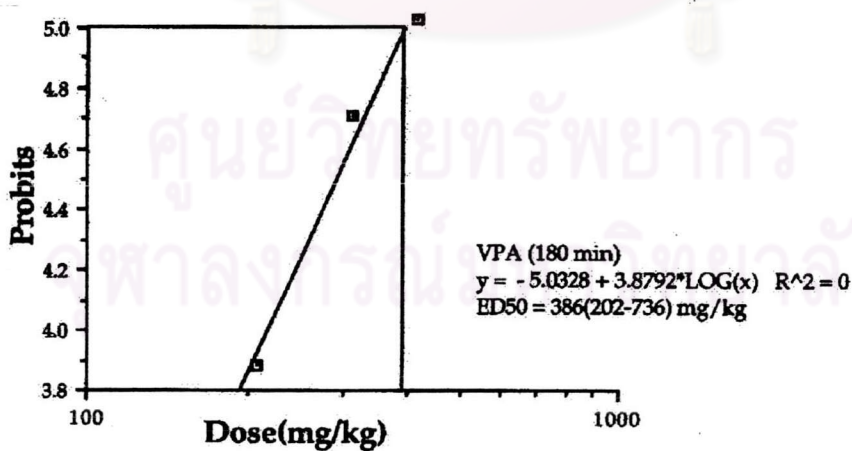
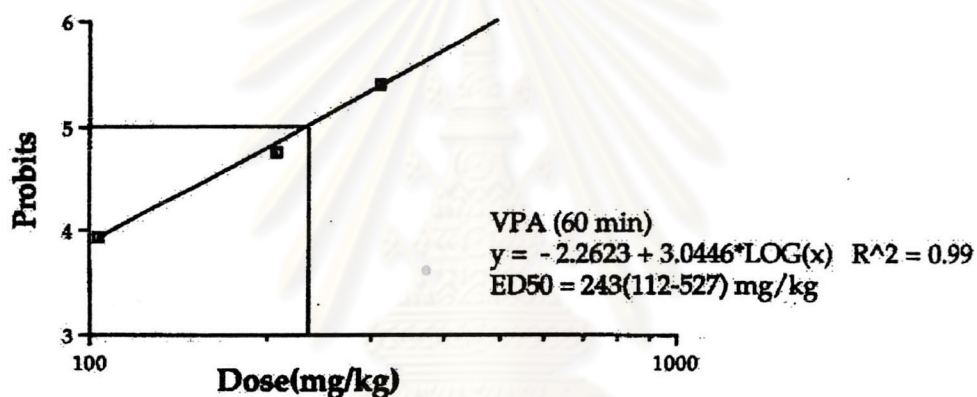
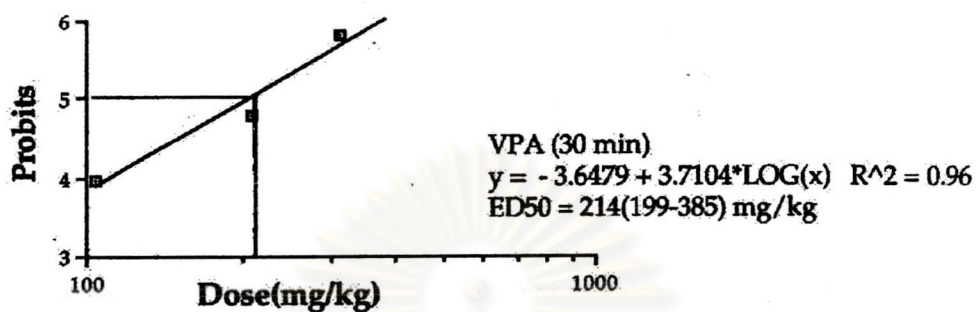
ศูนย์วิทยทรัพยากร  
จุฬาลงกรณ์มหาวิทยาลัย



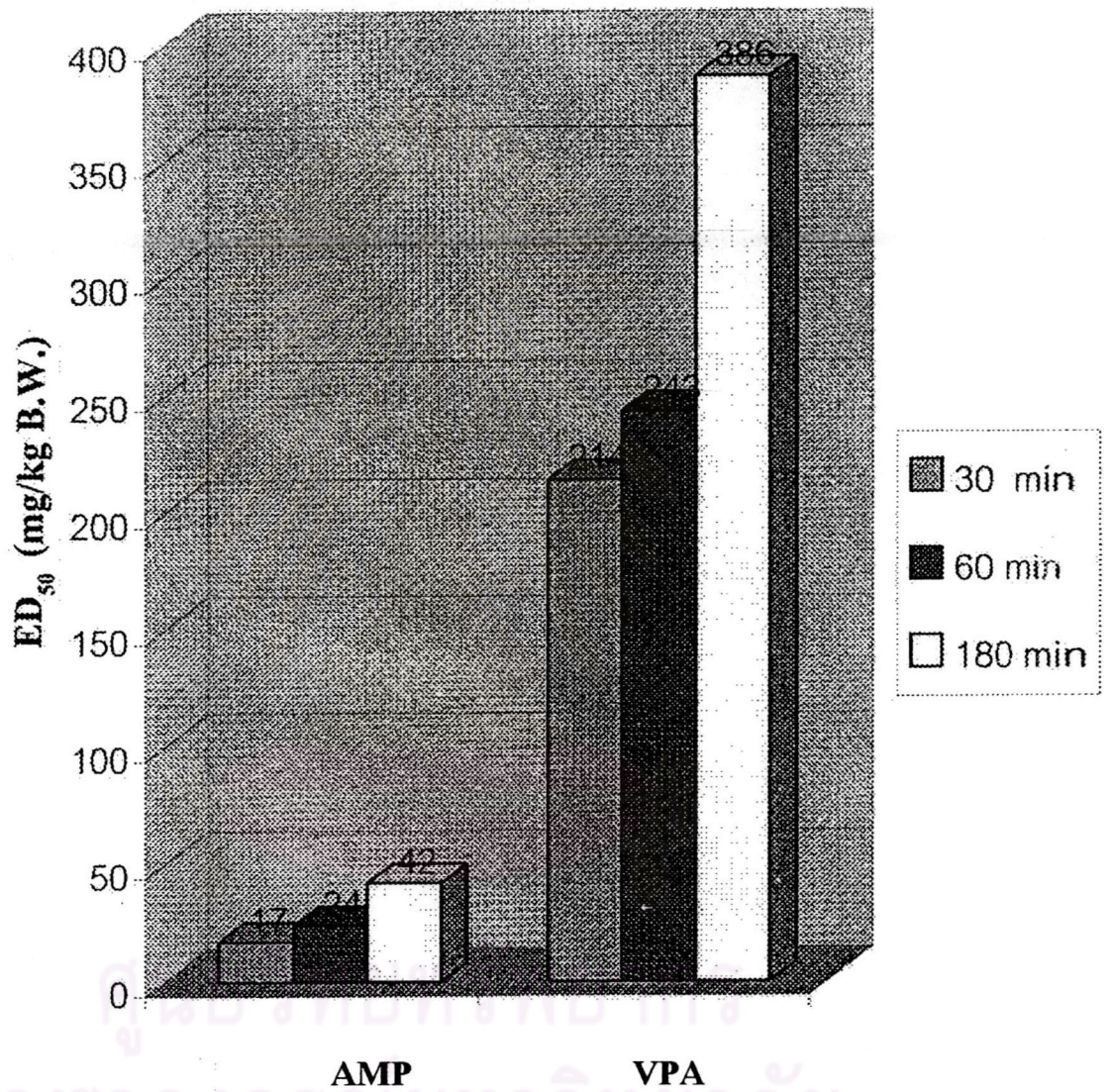
**APPENDIX**

ศูนย์วิทยทรัพยากร  
จุฬาลงกรณ์มหาวิทยาลัย





Log dose response curves of VPA (i.p.) on MES at 30, 60 and 180 min pretreated time.



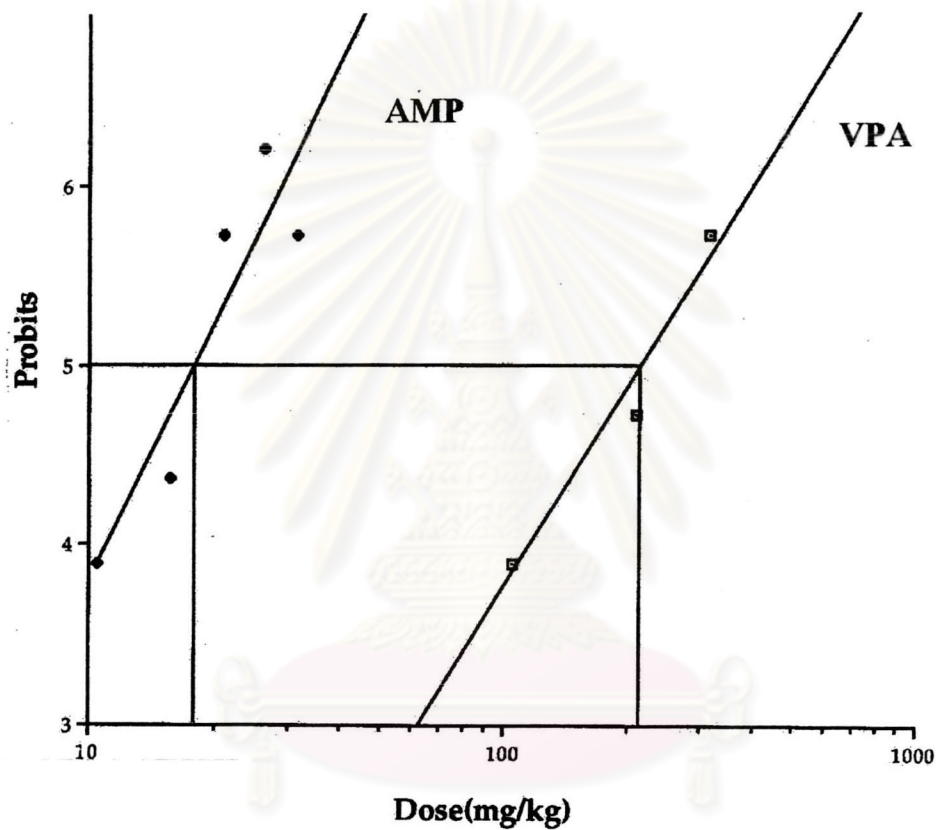
Comparison of ED<sub>50</sub> at various pretreated times of intraperitoneally given AMP and VPA against MES in mice.

$$\text{VPA} = -3.6479 + 3.7104 \cdot \text{LOG}(x) \quad R^2 = 0.960$$

$$\text{ED}_{50} = 214 \text{ mg/kg}$$

$$\text{AMP} = -0.96420 + 4.8009 \cdot \text{LOG}(x) \quad R^2 = 0.834$$

$$\text{ED}_{50} = 17 \text{ mg/kg}$$



Log dose response curves of AMP and VPA (i.p.) on MES at 30 min pretreated time

## Anticonvulsant activity of AMP (i.p.) in PTZ test

Dose (mg/kg)	Pretreated time (min)	Result	
		seizure	non-seizure
30	30	6	2
	60	7	1
	180	7	1
40	30	8	0
	60	7	2
	180	5	3
50	30	6	2
	60	7	1
	180	5	3
70	30	4	4
	60	4	4
	180	4	4
90	30	2	6
	60	3	5
	180	3	5
100	60	1	7

## Anticonvulsant activity of VPA (i.p.) in PTZ test

Dose (mg/kg)	Pretreated time (min)	Result	
		seizure	non-seizure
75	30	5	3
100	30	3	5
150	30	1	8

## Anticonvulsant activity of AMP (i.p.) in strychnine test

Dose (mg/kg)	Animal	Result	
		Seizure	Non-seizure
20	8	6	2
30	8	7	1
40	8	6	2
50	8	8	0
60	8	6	2
80	8	6	2
90	8	7	1

## Lethality of VPA (i.p.) within 72 hours

Dose (mg/kg)	Animal	Result	
		+	-
400	8	4	4
500	8	6	2
600	8	6	2
800	8	7	1
1000	8	7	1

## Lethality of AMP (i.p.) within 72 hours

Dose (mg/kg)	Animal	Result	
		+	-
70	8	0	8
85	8	1	7
90	8	0	8
95	8	4	4
100	8	5	3
120	8	6	2
150	8	5	3
180	8	8	0

## Neurotoxicity of VPA (i.p.) by rotorod test(30 min)

Dose (mg/kg)	Pretreated time (min)	Result	
		normal	Motor impairment
200	30	6	2
400	30	3	5
600	30	1	7

## Neurotoxicity of AMP (i.p.) by rotorod test

Dose (mg/kg)	Pretreated time (min)	Result	
		normal	Motor impairment
10	30	5	3
15	30	6	2
25	30	2	6

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## Neurotoxicity of AMP (i.p.) by rotorod test

Dose (mg/kg)	Pretreated time (min)	Result	
		normal	Motor impairment
25	60	6	2
35	60	5	3
40	60	3	5

## Neurotoxicity of AMP (i.p.) by rotorod test

Dose (mg/kg)	Pretreated time (min)	Result	
		normal	Motor impairment
40	180	7	1
50	180	5	3
70	180	2	6

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## Barbiturate sleeping time

Group	No. of mice per dose	Mean	Standard deviation	Standard Error of Mean
Nss	8	53.37	22.04	7.79
PEG400	8	53	21.89	7.77
VPA200	8	85	45.98	16.25
VPA400	8	132.5	66.03	23.34
AMP17 <sup>a,c</sup>	8	170	49.67	17.56
AMP70 <sup>a,b,d,e</sup>	8	352.88	87.79	31.04

<sup>a</sup> p < 0.05 denote statistically significant from PEG400

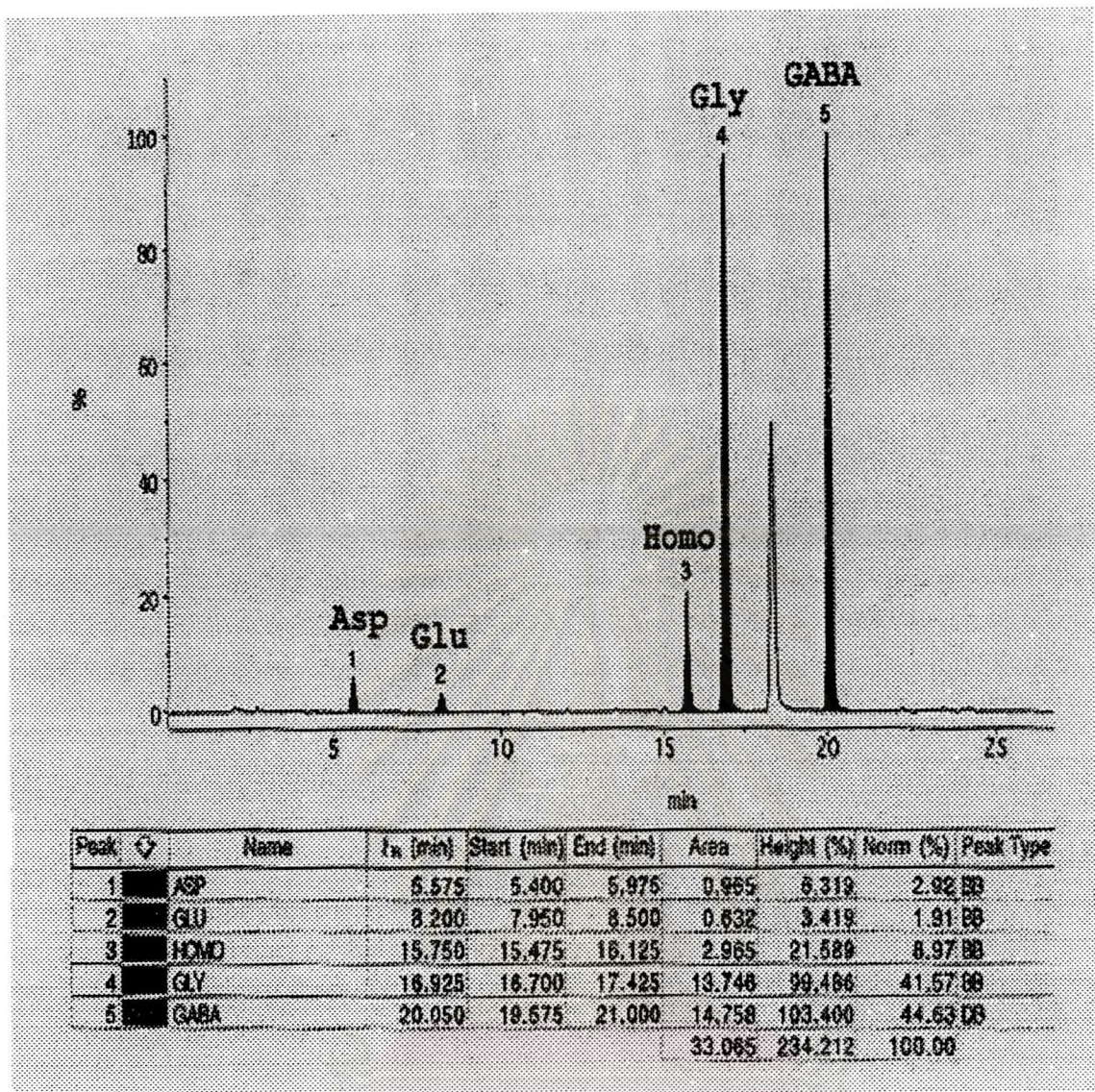
<sup>b</sup> p < 0.05 denote statistically significant from AMP17

<sup>c</sup> p < 0.05 denote statistically significant from AMP70

<sup>d</sup> p < 0.05 denote statistically significant from VPA 200

<sup>e</sup> p < 0.05 denote statistically significant from VPA 400

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HPLC chromatogram of OPA-derivatized amino acids from the rat cerebral cortex.

## Total amount of aspartate within 180 min after injection

Group	count	Mean	Standard Deviation	Standard Error of Mean
NSS	5	63.74	59.36	26.55
PEG400	5	95.58	70.71	31.62
VPA200	5	55.16	33.16	28.28
VPA400	5	29.03	19.24	8.34
AMP70	5	30.53	45.49	20.34
AMP100	5	75.96	68.33	35.03

## Total amount of glutamate within 180 min after injection

Group	count	Mean	Standard Deviation	Standard Error of Mean
NSS	5	52.47	48.20	21.55
PEG400	5	79.25	69.51	31.09
VPA200	5	50.57	33.15	13.77
VPA400*	5	26.28	12.42	5.07
AMP70*	5	25.05	13.52	6.05
AMP100	5	30.28	15.17	5.73

\* P<0.05 denotes statistically significant from PEG400

## Total amount of glycine within 180 min after injection

Group	count	Mean	Standard Deviation	Standard Error of Mean
NSS	5	17.35	21.69	18.64
PEG400	5	29.44	19.45	3.17
VPA200	5	54.13	53.05	23.72
VPA400	5	23.06	32.19	14.39
AMP70*	5	233.44	131.66	49.38
AMP100	5	31.93	43.85	19.61

\* P<0.05 denotes statistically significant from PEG400

## Total amount of GABA within 180 min after injection

Group	count	Mean	Standard Deviation	Standard Error of Mean
NSS	5	57.17	50.46	22.56
PEG400	5	80.70	33.57	15.01
VPA200	5	32.94	16.78	2.92
VPA400	5	98.84	36.57	16.35
AMP70*	5	193.20	43.37	22.11
AMP100	5	35.05	25.74	13.14

\* P<0.05 denotes statistically significant from PEG400

## Curriculum vitae

Miss Panapa Lekphoo was born on 20<sup>th</sup> May, 1976, in Nonthaburi, Thailand. She has got Bachelor Degree in Pharmacy in 1998 from Faculty of Pharmaceutical Sciences, Rangsit University, Phatomthani, Thailand. After graduation, she enrolled in the master's Degree Program in pharmaceutical Sciences, Chulalongkorn University.



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