



เอกสารอ้างอิง

ภาษาไทย

เต็ม สมิตินันท์. ชื่อพืชสมุนไพรแห่งประเทศไทย (ชื่อพฤกษศาสตร์-ชื่อพื้นเมือง) กรมป่าไม้, 2523

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ภาคผนวก

DATA ON GUINEA PIG ILEUM

DATA/ACh

PERCENT OF MAXIMUM CUMULATIVE DOSE RESPONSE
CONTROL GROUP (N =24)

NO./CONC.	1X10-8	3X10-8	1X10-7	3X10-7	1X10-6	3X10-6	1X10-5	3X10-5
1	2.1	4.2	41.0	66.9	85.4	100.0	95.0	89.5
2	0.0	0.0	20.4	37.9	86.0	88.1	94.0	100.0
3	0.0	0.0	15.2	20.7	73.1	100.0	93.4	83.8
4	5.2	5.6	18.5	21.6	58.0	100.0	78.4	98.8
5	0.0	3.1	36.4	62.0	86.0	91.9	100.0	94.2
6	2.9	3.5	11.8	31.5	68.8	94.1	100.0	75.3
7	0.0	3.3	7.6	42.4	64.7	100.0	96.2	88.0
8	0.0	6.0	14.9	17.9	89.6	77.6	100.0	97.8
9	0.0	0.0	0.0	4.8	73.0	100.0	88.3	98.7
10	0.0	2.4	5.7	54.7	84.9	92.0	100.0	92.0
11	18.4	30.7	66.3	85.9	98.2	100.0	94.2	86.9
12	0.0	1.2	16.6	22.7	100.0	78.4	93.7	79.8
13	1.9	2.8	15.6	15.6	61.0	90.3	100.0	96.6
14	0.0	4.4	9.5	29.7	49.0	69.4	93.2	100.0
15	0.0	4.9	30.7	45.3	100.0	97.4	89.0	
16	5.7	7.9	9.2	26.1	45.9	82.8	90.4	100.0
17	0.0	6.3	14.4	46.3	83.2	87.0	97.5	100.0
18	2.3	1.7	2.4	25.4	94.0	100.0	95.4	100.0
19	0.0	0.0	10.9	29.1	65.0	94.1	99.1	100.0
20	0.0	6.0	22.0	29.8	73.5	85.7	63.4	100.0
21	4.4	55.8	70.4	81.6	88.8	100.0	92.7	95.1
22	1.6	6.8	77.5	83.8	93.2	100.0	96.3	94.8
23	0.0	2.2	60.2	85.6	90.6	97.8	97.8	100.0
24	3.9	36.0	70.4	84.2	97.0	100.0	96.6	91.1
MEAN	2.02	8.11	26.98	43.81	79.53	92.78	93.53	94.02
S.D.	3.8737	13.1328	23.5998	25.0712	15.6751	8.5741	7.9084	7.0049
S.E.	0.7907	2.6807	4.8173	5.1176	3.1997	1.7502	1.6143	1.4606

DATA/ACH

PERCENT OF MAXIMUM CUMULATIVE DOSE RESPONSE
CONTROL GROUP (N = 16)

NO./CONC.	1X10-8	3X10-8	1X10-7	3X10-7	1X10-6	3X10-6	1X10-5	3X10-5
1	2.1	4.2	41.0	66.9	85.4	100.0	95.0	89.5
2	0.0	0.0	20.4	37.9	86.0	88.1	94.0	100.0
3	0.0	0.0	15.2	20.7	73.1	100.0	93.4	83.8
4	5.2	5.6	18.5	21.6	58.0	100.0	78.4	98.8
5	0.0	3.1	36.4	62.0	86.0	91.9	100.0	94.2
6	2.9	3.5	11.8	31.5	68.8	94.1	100.0	75.3
7	0.0	3.3	7.6	42.4	64.7	100.0	96.2	88.0
8	0.0	6.0	14.9	17.9	89.6	77.6	100.0	97.8
9	0.0	0.0	0.0	4.8	73.0	100.0	88.3	98.7
10	0.0	2.4	5.7	54.7	84.9	92.0	100.0	92.0
11	18.4	30.7	66.3	85.9	98.2	100.0	94.2	86.9
12	0.0	1.2	16.6	22.7	100.0	78.4	93.7	79.8
13	1.9	2.8	15.6	15.6	61.0	90.3	100.0	96.6
14	0.0	4.4	9.5	29.7	49.0	69.4	93.2	100.0
15	0.0	4.9	30.7	45.3	100.0	97.4	89.0	
16	5.7	7.9	9.2	26.1	45.9	62.8	90.4	100.0
MEAN	2.27	4.99	19.96	36.61	76.47	91.38	94.12	92.09
S.D.	4.5644	6.9819	16.0152	21.0543	16.9083	9.4020	5.5945	7.6760
S.E.	1.1411	1.7455	4.0038	5.2636	4.2271	2.3505	1.3986	1.9819

DATA/ACH

PERCENT OF MAXIMUM CUMULATIVE DOSE RESPONSE
TREATMENT GROUP (PLUS ALKALOID (R) 1.6×10^{-4} M.)

NO./CONC.	1×10^{-8}	3×10^{-8}	1×10^{-7}	3×10^{-7}	1×10^{-6}	3×10^{-6}	1×10^{-5}	3×10^{-5}
1	3.7	6.1	40.2	47.9	91.8	70.6	74.6	73.0
2	0.0	0.0	5.1	12.5	65.5	53.3	62.4	6.0
3	0.0	1.9	9.9	17.0	47.3	43.3	54.8	45.8
4	0.0	0.0	2.5	25.3	50.5	69.2	84.6	79.5
5	0.0	0.0	3.2	19.4	30.4	57.0	71.2	51.5
6	0.0	2.5	2.5	3.6	8.3	39.5	60.9	74.1
MEAN	0.61	1.76	10.60	20.94	48.96	55.47	68.08	54.00
S.D.	1.3718	2.2012	13.5021	13.7409	26.1743	11.7350	9.8768	27.1062
S.E.	0.5600	0.8986	5.5122	5.6097	10.6856	4.7908	4.0322	12.1222

DATA/ACH

PERCENT OF MAXIMUM CUMULATIVE DOSE RESPONSE
TREATMENT GROUP (PLUS ALKALOID (R) 4.9×10^{-4} M.)

NO./CONC.	1×10^{-8}	3×10^{-8}	1×10^{-7}	3×10^{-7}	1×10^{-6}	3×10^{-6}	1×10^{-5}	3×10^{-5}
1	0.0	0.0	0.0	4.2	10.0	32.6	31.0	37.7
2	0.0	0.0	0.0	3.8	7.2	25.5	38.7	45.5
3	0.0	0.0	0.0	3.4	7.6	25.9	30.7	19.0
4	0.0	0.0	4.9	11.1	17.0	33.6	38.3	54.9
5	0.0	0.0	2.3	5.8	43.4	68.2	73.3	39.9
6	0.0	0.0	3.8	4.4	14.1	37.9	23.8	25.6
7	0.0	0.0	0.0	6.0	6.0	22.3	14.1	22.8
8	0.0	0.0	0.0	5.2	7.5	24.6	37.3	35.1
9	0.0	0.0	0.0	2.4	2.6	20.4	18.3	20.7
10	0.0	0.0	0.0	1.9	4.7	5.7	28.8	21.7
MEAN	0.00	0.00	1.11	4.83	12.01	29.68	33.42	32.29
S.D.	0.0000	0.0000	1.7922	2.4453	11.2250	15.3370	15.4362	11.5834
S.E.	0.0000	0.0000	0.5668	0.7733	3.5496	4.8500	4.8814	3.6630

DATA/ACh

PERCENT OF MAXIMUM CUMULATIVE DOSE RESPONSE
TREATMENT GROUP (PLUS PAPAVERINE 1X10-6 M.)

NO./CONC.	1X10-8	3X10-8	1X10-7	3X10-7	1X10-6	3X10-6	1X10-5	3X10-5
1	0.0	0.0	0.0	2.8	10.9	15.4	42.5	49.5
2	0.0	0.0	1.7	6.0	17.1	51.7	27.7	62.6
3	0.0	3.2	4.1	20.0	24.1	75.5	75.9	90.9
4	0.0	0.0	0.0	3.9	19.6	41.1	56.5	79.2
MEAN	0.00	0.80	1.45	8.17	17.94	45.92	50.66	70.53
S.D.	0.0000	1.3778	1.6770	6.9267	4.7763	21.5551	17.7904	15.7845
S.E.	0.0000	0.6889	0.8385	3.4634	2.3881	10.7775	8.8952	7.8923

DATA/ACh

PERCENT OF MAXIMUM CUMULATIVE DOSE RESPONSE
TREATMENT GROUP (PLUS ATROPINE 1X10-8 M.)

NO./CONC.	1X10-8	3X10-8	1X10-7	3X10-7	1X10-6	3X10-6	1X10-5	3X10-5
1	0.0	0.0	1.9	6.3	52.4	64.6	78.6	85.4
2	0.0	0.0	1.0	1.6	39.8	60.7	79.6	81.7
3	0.0	0.0	0.0	0.0	2.8	45.9	72.9	83.4
4	0.0	0.0	0.0	0.0	16.7	53.7	70.0	77.3
MEAN	0.00	0.00	0.75	1.97	27.93	56.21	75.28	81.97
S.D.	0.0000	0.0000	0.8114	2.5866	19.3598	7.1372	3.9915	2.9859
S.E.	0.0000	0.0000	0.4057	1.2933	9.6799	3.5686	1.9957	1.4929

PERCENT OF MAXIMUM CUMULATIVE DOSE RESPONSE
CONTROL GROUP (N = 21)

DATA/HISTAMINE

NO. \ CONC.	1X10-8	3X10-8	1X10-7	3X10-7	1X10-6	3X10-6	1X10-5	3X10-5
1	0.0	2.6	20.0	34.8	64.3	82.6	97.4	100.0
2	3.8	35.6	60.6	71.2	88.9	100.0	95.2	88.0
3	4.3	18.4	21.5	58.2	80.5	77.3	100.0	83.6
4	0.0	4.5	36.1	52.3	57.1	76.1	100.0	89.7
5	1.7	4.0	49.7	79.7	88.7	100.0	90.4	91.0
6	9.3	60.0	83.5	100.0	88.1	97.2	89.1	73.0
7	33.9	49.5	78.2	74.7	81.7	76.8	100.0	74.0
8	2.7	24.1	64.1	82.7	88.6	95.5	100.0	92.7
9	1.4	4.6	57.9	76.4	81.5	91.7	100.0	95.8
10	1.6	3.7	40.0	74.2	81.1	97.9	100.0	96.8
11	27.7	56.2	58.1	70.0	72.7	89.6	100.0	95.4
12	3.2	42.9	65.3	70.8	78.5	84.5	93.2	100.0
13	16.5	47.2	59.7	67.7	68.5	77.0	100.0	100.0
14	3.8	8.5	56.8	66.5	77.5	92.4	100.0	84.3
15	2.9	18.0	52.2	66.8	75.1	92.2	100.0	96.1
16	2.2	11.1	49.1	65.5	70.4	94.7	100.0	83.6
17	16.4	34.9	62.1	75.9	81.0	97.4	100.0	88.4
18	0.0	0.0	57.3	73.6	86.0	94.8	100.0	91.5
19	0.0	3.1	11.8	29.4	75.0	81.6	96.1	100.0
20	0.0	2.1	48.9	72.5	89.7	100.0	98.3	87.1
21	5.2	50.5	63.6	73.4	75.4	100.0	89.5	67.2
MEAN	6.51	22.92	52.22	68.40	78.59	90.44	97.58	89.45
S.D	9.1757	20.4719	17.5679	14.8665	8.4996	8.4614	3.7343	9.1086
S.E.	2.0023	4.4673	3.8336	3.2441	1.8548	1.8464	0.8149	1.9877

PERCENT OF MAXIMUM CUMULATIVE DOSE RESPONSE
CONTROL GROUP (N = 17)

DATA/HISTAMINE

NO. \ CONC.	1X10-8	3X10-8	1X10-7	3X10-7	1X10-6	3X10-6	1X10-5	3X10-5
1	0.0	2.6	20.0	34.8	64.3	82.6	97.4	100.0
2	3.8	35.6	60.6	71.2	88.9	100.0	95.2	88.0
3	4.3	18.4	21.5	58.2	80.5	77.3	100.0	83.6
4	0.0	4.5	36.1	52.3	57.1	76.1	100.0	89.7
5	1.7	4.0	49.7	79.7	88.7	100.0	90.4	91.0
6	9.3	60.0	83.5	100.0	88.1	97.2	89.1	73.0
7	33.9	49.5	78.2	74.7	81.7	76.8	100.0	74.0
8	2.7	24.1	64.1	82.7	88.6	95.5	100.0	92.7
9	1.4	4.6	57.9	76.4	81.5	91.7	100.0	95.8
10	1.6	3.7	40.0	74.2	81.1	97.9	100.0	96.8
11	27.7	56.2	58.1	70.0	72.7	89.6	100.0	95.4
12	3.2	42.9	65.3	70.8	78.5	84.5	93.2	100.0
13	16.5	47.2	59.7	67.7	68.5	77.0	100.0	100.0
14	3.8	8.5	56.8	66.5	77.5	92.4	100.0	84.3
15	2.9	18.0	52.2	66.8	75.1	92.2	100.0	96.1
16	2.2	11.1	49.1	65.5	70.4	94.7	100.0	83.6
17	16.4	34.9	62.1	75.9	81.0	97.4	100.0	88.4
MEAN	7.73	25.04	53.81	69.84	77.90	89.58	97.96	90.15
S.D	9.7434	19.7239	16.5229	13.3152	8.7710	8.4391	3.5696	8.1115
S.E.	2.3631	4.7838	4.0074	3.2294	2.1273	2.0468	0.8658	1.9673

PERCENT OF MAXIMUM CUMULATIVE DOSE RESPONSE DATA/HISTAMINE
TREATMENT GROUP (PLUS ALKALOID (R) 1.6×10^{-4} M.)

NO. \ CONC.	1×10^{-8}	3×10^{-8}	1×10^{-7}	3×10^{-7}	1×10^{-6}	3×10^{-6}	1×10^{-5}	3×10^{-5}
1	0.0	2.9	35.6	68.3	69.2	76.0	96.2	97.1
2	0.0	0.0	9.6	79.8	72.1	93.3	88.0	93.8
3	0.0	0.0	10.5	14.8	22.7	35.5	60.9	78.5
4	3.5	7.4	60.0	60.6	61.0	65.5	90.3	73.2
5	0.0	0.0	5.1	14.1	14.1	33.9	78.0	79.7
6	0.0	5.0	36.5	50.7	50.7	67.5	81.1	76.1
7	4.8	39.8	65.7	61.2	59.2	60.2	76.1	60.9
8	0.0	2.7	37.3	58.6	67.7	71.4	85.5	84.1
9	0.0	1.9	4.6	49.1	51.9	74.1	83.8	83.8
10	0.0	1.1	3.2	19.5	20.5	74.2	92.1	93.2
MEAN	0.76	6.07	26.81	47.69	48.91	65.15	83.19	82.03
S.D.	1.6419	11.4678	22.3190	22.2247	20.6715	17.2938	9.5067	10.3590
S.E.	0.5192	3.6264	7.0579	7.0281	6.5369	5.4689	3.0063	3.2758

PERCENT OF MAXIMUM CUMULATIVE DOSE RESPONSE DATA/HISTAMINE
TREATMENT GROUP (PLUS ALKALOID (R) 4.9×10^{-4} M.)

NO. \ CONC.	1×10^{-8}	3×10^{-8}	1×10^{-7}	3×10^{-7}	1×10^{-6}	3×10^{-6}	1×10^{-5}	3×10^{-5}
1	0.8	2.7	3.1	3.1	3.1	3.5	38.8	46.2
2	0.0	0.0	0.0	2.3	1.8	1.8	32.0	54.8
3	0.0	0.0	2.8	4.0	2.0	3.2	45.6	60.9
4	0.0	0.8	1.3	2.1	2.1	3.0	4.2	21.2
5	0.0	1.0	2.0	2.4	2.4	2.4	5.4	26.8
6	0.0	0.0	3.1	3.5	1.8	2.7	59.3	50.9
7	0.0	0.9	1.7	2.6	2.6	3.0	44.0	62.5
MEAN	0.11	0.77	1.99	2.87	2.26	2.80	32.75	46.18
S.D.	0.2692	0.8889	1.0454	0.6566	0.4332	0.5061	19.2544	15.0148
S.E.	0.1017	0.3360	0.3951	0.2482	0.1637	0.1913	7.2775	5.6751

PERCENT OF MAXIMUM CUMULATIVE DOSE RESPONSE DATA/HISTAMINE
TREATMENT GROUP (PLUS PAPAVERINE 1×10^{-6} M.)

NO. \ CONC.	1×10^{-8}	3×10^{-8}	1×10^{-7}	3×10^{-7}	1×10^{-6}	3×10^{-6}	1×10^{-5}	3×10^{-5}
1	0.0	2.0	52.4	73.6	82.1	88.9	96.7	86.6
2	0.0	0.9	0.0	6.6	51.3	82.9	91.7	96.9
3	0.0	0.0	11.2	53.6	75.1	90.6	102.1	86.7
4	0.7	14.1	56.1	64.9	71.5	95.1	80.3	71.8
MEAN	0.16	4.23	29.92	49.69	70.00	89.36	92.72	85.52
S.D.	0.2839	5.7380	24.6884	25.8774	11.4390	4.3636	8.0577	8.9579
S.E.	0.1420	2.8690	12.3442	12.9387	5.7195	2.1818	4.0288	4.4790

DATA/5-HT

PERCENT OF MAXIMUM CUMULATIVE DOSE RESPONSE
CONTROL (N = 18)

NO\CONC.	1X10-8	3X10-8	1X10-7	3X10-7	1X10-6	3X10-6	1X10-5	3X10-5
1	4.3	5.4	9.7	17.2	31.7	75.3	100.0	
2	4.4	7.1	8.9	11.6	17.8	63.1	100.0	
3	5.4	16.1	19.3	25.5	57.9	77.2	100.0	87.4
4	0.0	2.3	6.8	10.2	25.6	84.1	100.0	95.5
5	11.6	15.1	49.3	64.4	70.5	95.9	100.0	69.2
6	0.0	9.0	22.1	51.6	69.7	100.0	98.4	82.0
7	0.0	3.6	4.3	15.2	18.1	74.6	100.0	68.8
8	1.6	4.8	12.0	21.7	41.0	98.8	100.0	
9	5.6	11.1	16.0	25.0	31.9	50.0	100.0	98.6
10	7.1	12.2	14.3	24.5	26.5	61.2	77.6	100.0
11	3.6	9.8	14.3	18.8	25.4	35.3	69.6	100.0
12	4.8	5.6	12.4	14.4	22.4	84.4	100.0	
13	2.8	5.6	5.6	8.4	12.6	60.8	100.0	
14	5.8	5.8	7.6	13.1	25.8	70.2	100.0	77.3
15	1.4	2.1	2.8	3.9	6.0	26.0	100.0	89.1
16	4.3	5.8	8.7	18.8	26.1	63.8	100.0	68.1
17	1.1	17.2	57.1	73.3	74.4	78.4	100.0	81.3
18	0.0	25.2	27.9	55.7	61.9	93.0	100.0	67.7
MEAN	3.55	9.11	16.62	26.29	35.85	71.78	96.98	83.46
S.D	2.9792	5.9282	14.4079	19.8932	20.8267	20.0555	8.3783	12.1321
S.E.	0.7022	1.3973	3.3960	4.6889	4.9089	4.7271	1.9748	3.3648

DATA/5-HT

PERCENT OF MAXIMUM CUMULATIVE DOSE RESPONSE
CONTROL (N = 11)

NO\CONC.	1X10-8	3X10-8	1X10-7	3X10-7	1X10-6	3X10-6	1X10-5	3X10-5
1	4.3	5.4	9.7	17.2	31.7	75.3	100.0	
2	4.4	7.1	8.9	11.6	17.8	63.1	100.0	
3	5.4	16.1	19.3	25.5	57.9	77.2	100.0	87.4
4	0.0	2.3	6.8	10.2	25.6	84.1	100.0	95.5
5	11.6	15.1	49.3	64.4	70.5	95.9	100.0	69.2
6	0.0	9.0	22.1	51.6	69.7	100.0	98.4	82.0
7	0.0	3.6	4.3	15.2	18.1	74.6	100.0	68.8
8	1.6	4.8	12.0	21.7	41.0	98.8	100.0	
9	5.6	11.1	16.0	25.0	31.9	50.0	100.0	98.6
10	7.1	12.2	14.3	24.5	26.5	61.2	77.6	100.0
11	3.6	9.8	14.3	18.8	25.4	35.3	69.6	100.0
MEAN	3.97	8.78	16.10	25.97	37.84	74.14	95.05	87.68
S.D	3.3948	4.3745	11.6401	16.1145	18.5655	19.6374	10.2634	12.3159
S.E.	1.0236	1.3189	3.5096	4.8587	5.5977	5.9209	3.0945	4.3543

PERCENT OF MAXIMUM CUMULATIVE DOSE RESPONSE
TREATMENT (PLUS ALKALOID (R) 1.6×10^{-4} M.)

DATA/5 HT

NO\CONC.	1×10^{-8}	3×10^{-8}	1×10^{-7}	3×10^{-7}	1×10^{-6}	3×10^{-6}	1×10^{-5}	3×10^{-5}
1	2.2	3.8	6.5	10.2	14.0	52.2	82.8	
2	3.6	3.6	4.4	4.4	9.8	51.6	56.0	
3	4.8	7.5	7.8	10.2	13.4	51.5	81.8	73.2
4	4.5	7.4	9.7	13.6	20.5	72.7	108.0	65.3
5	12.3	13.0	36.3	57.5	63.7	84.2	80.1	46.6
6	0.0	0.0	9.0	10.7	27.9	75.4	76.2	27.9
7	0.0	0.0	4.3	11.6	12.3	56.5	73.9	49.3
MEAN	3.92	5.03	11.14	16.90	23.07	63.44	79.83	52.45
S.D.	3.8898	4.3062	10.4476	16.7921	17.5210	12.6614	14.2402	15.7807
S.E.	1.4702	1.6276	3.9488	6.3468	6.6223	4.7855	5.3823	7.0574

PERCENT OF MAXIMUM CUMULATIVE DOSE RESPONSE
TREATMENT (PLUS ALKALOID (R) 4.9×10^{-4} M.)

DATA/5 HT

NO\CONC.	1×10^{-8}	3×10^{-8}	1×10^{-7}	3×10^{-7}	1×10^{-6}	3×10^{-6}	1×10^{-5}	3×10^{-5}
1	2.4	4.8	7.2	9.6	14.5	50.6	38.6	
2	0.0	0.0	0.0	4.2	5.6	22.2	59.7	
3	0.0	0.0	0.0	4.1	7.1	18.4	28.6	16.3
4	0.0	0.0	4.5	6.3	6.7	16.1	39.7	31.7
MEAN	0.60	1.20	2.92	6.03	8.46	26.82	41.65	24.01
S.D.	1.0434	2.0868	3.0824	2.2549	3.5091	13.9079	11.3017	7.6849
S.E.	0.5217	1.0434	1.5412	1.1274	1.7545	6.9540	5.6509	5.4341

DATA/5-HT

PERCENT OF MAXIMUM CUMULATIVE DOSE RESPONSE
TREATMENT (PLUS PAPAVERINE 1×10^{-6} M.)

NO\CONC.	1×10^{-8}	3×10^{-8}	1×10^{-7}	3×10^{-7}	1×10^{-6}	3×10^{-6}	1×10^{-5}	3×10^{-5}
1	4.0	4.8	6.0	8.8	13.6	54.0	65.6	
2	4.2	5.6	5.6	6.3	8.4	51.7	103.5	
3	4.8	6.1	7.8	11.1	19.9	52.8	92.9	78.0
4	2.8	3.2	3.2	4.2	7.4	18.9	46.3	124.9
5	0.0	5.8	11.6	13.8	15.9	72.5	101.4	43.5
6	0.0	2.6	44.3	70.3	67.8	75.8	90.1	78.8
7	0.0	27.0	39.3	57.5	60.1	66.9	91.2	69.2
MEAN	2.26	7.85	16.83	24.57	27.59	56.09	84.44	78.88
S.D	2.0297	7.9075	16.0333	25.2754	23.4197	17.6770	19.3125	26.3307
S.E	0.7672	2.9888	6.0600	9.5532	8.8518	6.6813	7.2994	11.7755

DATA ON MICE STOMACH

(1). on BaCl_2 -induced contraction

DATA
BaCl₂-INDUCED CONTRACTION IN MICE STOMACH
(TREATMENT WITH ALKALOID (R) 4.9X10⁻⁵ M.)

NUMBER	CONTROL	TREATMENT	REDUCTION(%)
No.1	10.0	7.7	23.00
No.2	11.8	10.5	10.62
No.3	11.2	9.3	17.08
No.4	15.1	13.1	13.25
No.5	15.0	13.4	10.35

MEAN	12.61	10.80	14.86
S.D.	2.0678	2.2016	4.7362
S.E	0.9248	0.9846	2.1181

(TREATMENT WITH ALKALOID (R) 1.6X10⁻⁴ M.)

NUMBER	CONTROL	TREATMENT	REDUCTION(%)
No.1	11.5	5.8	49.26
No.2	11.3	5.6	50.53
No.3	10.0	5.6	44.31
No.4	13.5	3.6	73.76
No.5	13.8	7.7	44.54

MEAN	12.03	5.64	52.48
S.D.	1.4386	1.3059	10.9257
S.E	0.6434	0.5840	4.9861

(TREATMENT WITH ALKALOID (R) 4.9X10⁻⁴ M.)

NUMBER	CONTROL	TREATMENT	REDUCTION(%)
No.1	8.0	0.7	91.57
No.2	9.3	1.4	84.62
No.3	10.3	1.3	87.67
No.4	13.2	2.3	82.92
No.5	12.1	2.5	79.13

MEAN	10.57	1.63	85.18
S.D.	1.8822	0.6761	4.2227
S.E	0.8417	0.3024	1.8884

DATA
BaCl₂-INDUCED CONTRACTION IN MICE STOMACH
(TREATMENT WITH PAPAVERINE 1X10⁻⁶ M.)

NUMBER	CONTROL	TREATMENT	REDUCTION(%)
No.1	14.9	11.7	21.41
No.2	13.7	10.9	20.58
No.3	8.1	7.3	10.71
No.4	15.3	11.2	26.93
No.5	9.6	7.7	20.06

MEAN	12.31	9.73	19.94
S.D.	2.9116	1.8796	5.2259
S.E	1.3021	0.8406	2.3371

(TREATMENT WITH PAPAVERINE 3X10⁻⁶ M.)

NUMBER	CONTROL	TREATMENT	REDUCTION(%)
No.1	12.5	8.3	33.49
No.2	14.2	9.4	33.87
No.3	8.5	6.1	28.42
No.4	12.1	10.0	17.05
No.5	13.5	10.4	23.45

MEAN	12.15	8.82	27.26
S.D.	1.9769	1.5438	6.3667
S.E	0.8841	0.6904	2.8473

(TREATMENT WITH PAPAVERINE 1X10⁻⁵ M.)

NUMBER	CONTROL	TREATMENT	REDUCTION(%)
No.1	10.5	1.5	85.49
No.2	13.9	3.2	77.23
No.3	10.1	3.7	63.24
No.4	9.7	3.1	67.77
No.5	12.7	3.3	74.25

MEAN	11.38	2.96	73.59
S.D.	1.6431	0.7506	7.6952
S.E	0.7348	0.3357	3.4414

DATA ON MICE STOMACH

(2). on maximum of tonic contraction
induced by CaCl_2

CONTROL GROUP (CA.)

TIME (MINUTES)	0	0.5	1	1.5	2
NO. 1 (AGENT)	6.1	6.1	6.0	5.8	5.6
NO. 2 (AGENT)	6.5	6.4	6.2	5.9	5.7
NO. 3 (AGENT)	6.1	6.0	5.8	5.6	5.4
NO. 4 (AGENT)	5.7	5.5	5.2	4.8	4.4
NO. 1 (VERAPAMIL)	4.6	4.5	4.3	4.1	3.8
NO. 2 (VERAPAMIL)	3.9	3.9	3.8	3.7	3.6
NO. 3 (VERAPAMIL)	5.4	5.3	5.2	5.0	4.8
NO. 4 (VERAPAMIL)	5.0	4.9	4.9	4.8	4.6

CONTROL GROUP (CONTINUE) (CA.)

	3	5	7	9	11	13	15
5.1	4.6	4.3	4.2	4.2	4.1	4.1	
5.2	4.6	4.4	4.4	4.4	4.4	4.4	
4.8	4.2	3.8	3.8	3.8	3.8	3.8	
3.9	3.4	3.3	3.2	3.3	3.4	3.5	
3.5	3.1	2.9	2.8	2.8	2.7	2.7	
3.5	3.3	3.3	3.4	3.4	3.5	3.5	
4.4	4.0	3.8	3.7	3.7	3.7	3.8	
4.5	4.2	4.0	3.8	3.9	3.8	3.9	

CONTROL GROUP (mm.Hg)							
TIME (MINUTES)	0	0.5	1	1.5	2		
NO.1 (AGENT)	10.2	10.1	10.0	9.6	9.3		
NO.2 (AGENT)	10.8	10.7	10.3	9.8	9.4		
NO.3 (AGENT)	10.2	10.0	9.7	9.3	8.9		
NO.4 (AGENT)	9.4	9.2	8.6	8.0	7.3		
NO.1 (VERAPAMIL)	7.6	7.4	7.2	6.8	6.3		
NO.2 (VERAPAMIL)	6.4	6.4	6.3	6.2	6.0		
NO.3 (VERAPAMIL)	8.9	8.8	8.6	8.3	7.9		
NO.4 (VERAPAMIL)	8.3	8.2	8.2	8.0	7.7		
CONTROL GROUP (CONTINUE) (mm.Hg)							
	3	5	7	9	11	13	15
	8.5	7.6	7.2	6.9	6.9	6.8	6.8
	8.6	7.6	7.3	7.3	7.3	7.3	7.3
	8.0	6.9	6.3	6.3	6.3	6.3	6.3
	6.5	5.7	5.4	5.3	5.5	5.6	5.8
	5.8	5.1	4.8	4.6	4.6	4.5	4.5
	5.8	5.5	5.5	5.6	5.6	5.8	5.8
	7.3	6.6	6.3	6.2	6.2	6.2	6.3
	7.5	7.0	6.6	6.3	6.4	6.5	6.5

PERCENT OF MAXIMUM CONTRACTION

DATA

CaCl₂-INDUCED CONTRACTION
IN HIGH POTASSIUM-DEPOLARIZED MICE STOMACH
CONTROL GROUP

TIME (MINUTES)	0	0.5	1	1.5	2
NO. 1 (AGENT)	100.00	99.18	98.36	94.26	90.98
NO. 2 (AGENT)	100.00	98.46	94.62	90.77	86.92
NO. 3 (AGENT)	100.00	98.36	95.08	90.99	87.70
NO. 4 (AGENT)	100.00	97.35	91.15	84.96	77.88
NO. 1 (VERAPAMIL)	100.00	97.80	94.51	89.01	83.52
NO. 2 (VERAPAMIL)	100.00	100.00	97.40	96.10	93.51
NO. 3 (VERAPAMIL)	100.00	99.07	96.26	92.52	88.79
NO. 4 (VERAPAMIL)	100.00	98.99	98.99	96.97	92.93
MEAN	100.000	98.651	95.796	91.947	87.778
S.D.	0.0000	0.7852	2.3645	3.6745	4.8423
S.E.	0.0000	0.2776	0.8360	1.2991	1.7120

CONTROL GROUP (CONTINUE)

	3	5	7	9	11	13	15
	83.61	74.59	70.49	68.03	68.03	66.39	66.39
	79.23	70.00	66.92	66.92	66.92	66.92	67.69
	78.69	68.03	62.30	61.48	61.48	62.30	62.30
	69.03	60.18	57.52	56.64	58.41	59.29	61.06
	76.92	67.03	62.64	60.44	60.44	59.34	59.34
	90.91	85.71	85.71	87.01	87.01	90.91	90.91
	82.24	73.83	70.09	69.16	69.16	69.16	70.09
	90.91	84.85	79.80	76.77	77.78	75.76	78.79
	81.442	73.028	69.434	68.306	68.653	68.759	69.572
	6.8156	6.2079	8.7989	9.1444	8.9996	9.8033	9.9006
	2.4097	2.9019	3.1109	3.2330	3.1818	3.4660	3.5004

PERCENT OF MAXIMUM CONTRACTION

DATA

CaCl₂-INDUCED CONTRACTION
 IN HIGH POTASSIUM-DEPOLARIZED MICE STOMACH
 TREATMENT GROUP (ADDED BY AGENT 1.6X10⁻⁴ M.)

TIME (MINUTES)	0	0.5	1	1.5	2
NO. 1 (AGENT)	105.74	95.08	84.43	73.77	65.57
NO. 2 (AGENT)	87.69	69.23	60.00	52.31	43.85
NO. 3 (AGENT)	98.36	81.15	72.13	63.11	54.92
NO. 4 (AGENT)	109.73	86.73	74.34	61.95	53.10
MEAN	100.381	83.046	72.723	62.785	54.359
S.D.	8.3855	9.3924	8.6861	7.6037	7.7168
S.E.	4.1928	4.6962	4.3430	3.8019	3.8584

TREATMENT GROUP (CONTINUE)

	3	5	7	9	11	13	15
	53.28	36.07	28.69	23.77	22.13	20.49	19.67
	35.38	23.85	19.23	15.38	14.62	14.62	14.62
	42.62	27.05	19.67	17.21	15.57	13.93	13.93
	40.71	28.32	22.12	18.58	16.81	15.93	15.04
	42.999	28.820	22.429	18.738	17.284	16.243	15.817
	6.5008	4.4896	3.7784	3.1193	2.9053	2.5558	2.2609
	3.2504	2.2448	1.8892	1.5597	1.4526	1.2779	1.1305

DATA ON MICE STOMACH

(3). on cumulative dose -response

curve of CaCl_2

NO\CONC.[Ca ²⁺]	CONTROL RAW DATA (cm.)							
	1X10 ⁻⁵	3X10 ⁻⁵	1X10 ⁻⁴	3X10 ⁻⁴	1X10 ⁻³	3X10 ⁻³	1X10 ⁻²	3X10 ⁻²
1	0.1	0.4	1.0	2.2	4.3	6.0	7.8	9.2
2	0.15	0.3	0.7	1.9	4.1	6.3	7.7	13.3
3	0.0	0.4	1.4	3.5	6.0	7.7	9.2	10.7
4	0.0	0.3	1.1	2.6	5.0	7.0	8.9	10.6
MEAN	0.06	0.35	1.05	2.55	4.85	6.75	8.40	10.95
S.D.	0.075	0.057	0.289	0.695	0.858	0.759	0.762	1.710
S.E.	0.038	0.29	0.144	0.348	0.429	0.380	0.381	0.855

NO\CONC.[Ca ²⁺]	CONTROL PERCENT OR MAXIMUM CONTRACTION (in each preparation)							
	1X10 ⁻⁵	3X10 ⁻⁵	1X10 ⁻⁴	3X10 ⁻⁴	1X10 ⁻³	3X10 ⁻³	1X10 ⁻²	3X10 ⁻²
1	1.09	4.35	10.87	23.91	46.74	65.22	84.78	100.00
2	1.13	2.26	5.26	14.29	30.83	47.37	57.89	100.00
3	0.00	3.74	13.08	32.71	56.07	71.96	85.98	100.00
4	0.00	2.83	10.38	24.53	47.17	66.04	83.96	100.00
MEAN	0.555	3.295	9.898	23.860	45.202	62.648	78.152	100.000
S.D.	1.9860	0.9307	3.3072	7.5357	10.5025	10.6184	13.5338	0.000
S.E.	0.993	0.4653	1.6536	3.7678	5.2512	5.3092	6.7669	0.000

PREINCUBATED WITH ALKALOID (R.) 4.9×10^{-5} M.
RAW DATA (cm.)

NO\CONC.[Ca ²⁺]	1X10 ⁻⁵	3X10 ⁻⁵	1X10 ⁻⁴	3X10 ⁻⁴	1X10 ⁻³	3X10 ⁻³	1X10 ⁻²	3X10 ⁻²
1	0.0	0.2	0.4	1.1	2.4	4.2	6.1	9.2
2	0.0	0.0	0.0	1.6	2.7	4.0	5.5	11.5
3	0.0	0.1	0.4	1.8	3.6	5.3	6.7	9.0
4	0.0	0.1	0.6	1.8	3.5	5.5	7.7	9.8
MEAN	0.00	0.10	0.35	1.58	3.05	4.75	6.50	9.88
S.D.	0.000	0.082	0.252	0.330	0.592	0.759	0.938	1.135
S.E.	0.000	0.041	0.126	0.165	0.296	0.380	0.469	0.568

PREINCUBATED WITH ALKALOID (R.) 4.9×10^{-5} M.
PERCENT OF MAXIMUM CONTRACTION (in each preparation)

NO\CONC.[Ca ²⁺]	1X10 ⁻⁵	3X10 ⁻⁵	1X10 ⁻⁴	3X10 ⁻⁴	1X10 ⁻³	3X10 ⁻³	1X10 ⁻²	3X10 ⁻²
1	0.00	2.17	4.35	11.96	26.09	45.65	66.30	100.00
2	0.00	0.00	0.00	12.03	20.30	30.08	41.35	86.47
3	0.00	0.93	3.74	16.82	33.64	49.53	62.62	84.11
4	0.00	0.94	5.66	16.98	33.02	51.89	72.64	92.45
MEAN	0.000	1.010	3.438	14.448	28.262	44.288	60.728	90.758
S.D.	0.0000	0.8901	2.4276	2.8328	6.3159	9.8148	13.5650	7.0913
S.E.	0.0000	0.4451	1.2138	1.4164	3.1580	4.9074	6.7825	3.5456



ประวัติผู้เขียน

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