

Further pharmacological screening of some West Indian medicinal plants

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Tabulated results are presented for the systematic pharmacological examination of a further 61 Jamaican medicinal plants.

IN an earlier paper (Feng, Haynes, Magnus, Plimmer & Sherratt, 1962) the results were given of a systematic pharmacological examination of aqueous extracts of 55 Jamaican plants, most of which had a reputation as medicinal substances. In continuation of this programme of examination of medicinal plants we now present results of the pharmacological examination of a further 61 plants.

The experimental procedure for the preparation of the extracts follows that given by Feng & others (1962) as does the procedure for pharmacological testing, except that the tests on rabbit heart and duodenum and rat stomach and diaphragm were omitted and a test on toad rectus was added.

Experimental

Extracts A and B were prepared and routine pharmacological tests were applied as described previously (Feng & others, 1962).

The following additional test was performed.

FROG RECTUS ABDOMINIS MUSCLE

A piece of rectus muscle from the Jamaican Toad (*Bufo marinus*) was suspended in frog Ringer's solution. The extract was introduced to test for its stimulating effect and for inhibition of spasm induced by acetylcholine.

TABLE I. RESULTS OF INVESTIGATIONS

Plant No.	Family	Botanical name	Toxicity mice i.p.	Guinea-pig ileum	Rat uterus	Toad rectus	Rat limb flow	Dog B.P.
56	Acanthaceae	<i>Barleria cristata</i> L.	+	++	-	--	----	P
57	"	<i>Thunbergia grandiflora</i> Roxb.	0	0	0	0	0	
58	Anacardiaceae	<i>Mangifera indica</i> L. var. "Black"	0	0	0	0		D
59	Annonaceae	<i>Annona squamosa</i> L.	+	--	0	0	----	D
60	Araceae	<i>Xanthosoma sagittifolium</i> Schott.	0	0	0	0	0	D
61	Asclepiadaceae	<i>Asclepias curassavica</i> L.	0	0	-	0	+++	O
62	"	<i>Calotropis procera</i> R.Br.	++	0	0			D
63	Bignoniaceae	<i>Catalpa longissima</i>	0	0	-	0	+++	O
64	"	<i>Tecomaria capensis</i> Fenzl.	0	0	--	0	++	D
65	Boraginaceae	<i>Cordia brownei</i> (Friesen) Johnson	++	0	--	-	++++	D
66	"	<i>Heliotropium angiospermum</i> Murray	0	+	+	0	--	O
67	"	<i>Heliotropium indicum</i> L.	0	0	0	0	--	D
68	"	<i>Tournefortia hirsutissima</i> L.	+	+	+	-	----	D

From the University of the West Indies, Kingston 7, Jamaica.

Plant No.	Family	Botanical name	Toxicity mice i.p.	Guinea-pig ileum	Rat uterus	Toad rectus	Rat limb flow	Dog B.P.
69	Cactaceae	<i>Harrisia gracilis</i> Britt.	0	+++	+++	0	---	D
70	"	<i>Opuntia tuna</i> Mill	0	+	0	0	++	D
71	Caesalpinaceae	<i>Bauhinia divaricata</i> L.	0	0	0	0	0	O
72	"	<i>Bauhinia galpini</i> N.E.Br.	+++	0	+++	0	----	P
73	"	<i>Caesalpinia bonducella</i> Flenn.	+	0	--	+	----	D
74	"	<i>Cassia emarginata</i> L.	0	0	0	0	+++	D
75	"	<i>Cassia fistula</i> L.	0	+++	0	0	+++	D
76	"	<i>Hymenaea courbaril</i> L.	+	0	0	0	++	D
77	Cappardiaceae	<i>Cleome viscosa</i> L.	+	0	--	0	0	P
78	Celastraceae	<i>Schaefferia frutescens</i> Jacq.	0	0	0	0	--	D
79	Combretaceae	<i>Terminalia catappa</i> L.	++	0	+++	0	0	D
80	Compositae	<i>Parthenium hysterophorus</i> L.	0	+	0	0	0	D
81	"	<i>Tithonia diversifolia</i> Gray	0	0	++	-	++++	D
82	Convolvulaceae	<i>Ipomea fistulosa</i> Mart.	++	0	0	0	--	D
83	Cucurbitaceae	<i>Cucumis anguria</i> L.	0	++	0	+	++	D
84	"	<i>Luffa cylindrica</i> M.Roem.	0	+	++++	+++	0	D
85	Euphorbiaceae	<i>Pedilanthus jamaicensis</i> Millsp. & Britton	0	+	-	0	++	D
86	"	<i>Ricinus communis</i> L.	0	0	+	+	++	D
87	Flacourtiaceae	<i>Casearia hirsuta</i> Sw.	0	0	--	0	++	P
88	"	<i>Laetia thamnia</i> L.	++	0	0	-	0	D
89	Gramineae	<i>Cymbopogon citratus</i> DC.	0	+	0	0	----	O
90	"	<i>Melocanna bambusoides</i> Trin.	0	0	-	+	--	O
91	"	<i>Panicum maximum</i> Jacq.	0	0	++++	0	0	P
92	Iridaceae	<i>Aristea compressa</i> Buch.	++	0	0	0	--	D
93	Liliaceae	<i>Sansevieria</i> spp.	++	0	--	-	----	O
94	Lythraceae	<i>Lagerstroemia indica</i> L.	+	0	0	0	--	D
95	Malvaceae	<i>Hibiscus rosa-sinensis</i> L.	0	+	0	0	0	O
96	Meliaceae	<i>Trichilia hirta</i> L.	0	0	0	0	----	D
97	Mimosaceae	<i>Acacia lutea</i> Hitch.	0	0	0	0	++	O
98	"	<i>Albizia lebeck</i> Benth.	+	0	0	0	0	D
99	Myrtaceae	<i>Eucalyptus</i> Spp.	0	+	0	0	----	O
100	Nyctaginaceae	<i>Pisonia aculeata</i> L.	++	0	0	+	++	P
101	Papilionaceae	<i>Brya ebenus</i> DC.	0	0	0	0	++	P
102	Phytolaccaceae	<i>Petiveria alliacea</i> L.	0	+	+	0	0	D
103	Plumbaginaceae	<i>Plumbago capensis</i> Thunb.	++	++++	+++	0	--	D
104	Polygonaceae	<i>Antigonon leptopus</i> Hook & Arn.	++	0	+++	0	0	D
105	"	<i>Polygonum chinense</i> L.	+	0	--	0	0	D
106	Rhamnaceae	<i>Ziziphus mauritiana</i> Lam. (<i>Ziziphus jujuba</i> Lam.)	+	0	++++	0	++	D
107	Rubiaceae	<i>Randia aculeata</i> L.	0	--	-	0	0	O
108	Sapindaceae	<i>Mellicocca bijuga</i> L.	0	0	0	0	0	D
109	Sapotaceae	<i>Chrysophyllum cainito</i> L.	0	0	0	0	----	D
110	Solanaceae	<i>Capsicum frutescens</i> L.	0	0	++	0	----	D
111	"	<i>Solanum verbascifolium</i> L.	+++	0	+	+	0	P
112	Verbenaceae	<i>Citharexylon</i> Spp.	0	0	-	0	+++	D
113	"	<i>Clerodendrum fallax</i> Lindl.	0	0	-	0	++	D
114	"	<i>Verbena bonaviensis</i> L.	0	+	0	0	0	O
115	Vitaceae	<i>Cissus sicyoides</i> L.	0	0	++++	0	++	D
116	Zygophyllaceae	<i>Kallstroemia maxima</i> Terr. et Gr.	+	0	0	0	+++	D

WEST INDIAN MEDICINAL PLANTS

Results

The results obtained for extracts A are tabulated in Table I: the results for extracts B are omitted as, in general, no further information was provided by examination of these extracts. The numbering of the plants is a continuation of that given in the earlier paper and the same system of expression of results has been used.

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Reference

Feng, P. C., Haynes, L. J., Magnus, K. E., Plimmer, J. R. & Sherratt, H. S. A. (1962). *J. Pharm. Pharmacol.*, **14**, 556-561.