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In vitro antiprotozoal and cytotoxic activity of ethnopharmacologically selected guinean plants. — Source link

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Topics: Spondias mombin, Guiera senegalensis, Terminalia macroptera, Combretum glutinosum and Antiprotozoal

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Table 1: *In vitro* antiprotozoal and cytotoxic activity of plant extracts

Plant name	Plant part (solvent)	Antiprotozoal activity (IC_{50}, µg/mL)				Cytotoxicity (CC_{50}, µg/mL)	Selectivity index			
		Tbb	T.cruzi	L.Inf	Pf-K1	MRC-5	MRC-5 / Tbb	MRC-5 / T.cruzi	MRC-5 / L.inf	MRC-5 / Pf-K1
Albizia zygia (DC.) J.F.Macbr.	Sb (EtOH 70%)	22.4	>64.0	22.4	18.1	>64.0	>2.9	Nd	>2.9	>3.5
Alchornea cordifolia (Schumach. & Thonn.) Müll. Arg.	Sb (MeOH)	8.5	11.3	32.5	9.5	>64.0	>7.5	>5.7	>2.0	>6.7
Alchornea cordifolia	Sb (H_2O)	>64.0	>64.0	>64.0	11.0	>64.0	Nd	Nd	Nd	>5.8
Alchornea cordifolia	L (MeOH)	8.6	9.6	32.5	9.3	>64.0	>7.5	>6.7	>2.0	>6.9
Alchornea cordifolia	Sb (Hexane)	32.2	27.9	>64.0	>64.0	>64.0	>2.0	>2.3	Nd	Nd
Alchornea cordifolia	L (Hexane)	8.3	25.8	38.0	25.9	>64.0	>7.7	>2.5	>1.7	>2.5
Azadirachta indica A. Juss.	L (MeOH)	8.2	20.7	>64.0	18.4	34.3	4.2	1.6	<0.5	1.9
Azadirachta indica	L (H_2O)	>64.0	>64.0	>64.0	>64.0	>64.0	Nd	Nd	Nd	Nd
Azadirachta indica	L ($CHCl_3$)	20.2	40.0	32.5	>64.0	>64.0	>3.2	>1.6	>2.0	Nd
Bridelia ferruginea Benth.	L (EtOH 70%)	23.6	1.7	20.7	>64.0	13.0	0.5	7.5	0.6	<0.2
Carica papaya L.	L (MeOH)	8.2	8.2	32.5	11.4	32.2	3.9	3.9	1.0	2.8
Carica papaya	Rb (MeOH)	30.1	33.8	32.5	43.3	>64.0	>2.1	>1.9	>2.0	>1.5
Cassia sieberiana DC.	Sb (EtOH 70%)	19.4	11.4	>64.0	46.1	38.0	2.0	3.3	<0.6	0.8
Cleistopholis patens Engl. & Diels.	Sb (EtOH 70%)	11.4	22.8	20.7	29.1	23.3	2.0	1.0	1.1	0.8
Cochlospermum tinctorium A. Rich.	Rb ($CHCl_3$)	Nt	Nt	Nt	17.1	>64.0	-	-	-	>3.7
Combretum glutinosum Perr.	L (MeOH)	26.5	23.7	>64.0	21.8	>64.0	>2.4	>2.7	Nd	>2.9
Combretum glutinosum	L ($CHCl_3$)	2.9	2.2	20.7	20.2	20.5	7.0	9.4	1.0	1.0
Diospyros mespiliformis Hochst.	L (EtOH 70%)	25.2	25.8	>64.0	24.9	>64.0	>2.5	>2.5	Nd	>2.6

Erythrina senegalensis DC.	L (EtOH 70%)	21.0	20.5	>64.0	29.7	>64.0	>3.0	>3.1	Nd	>2.1
Ficus sp	Sb (Hexane)	8.1	26.0	32.5	46.6	35.2	4.4	1.4	1.1	0.8
Ficus sp	Sb (MeOH)	39.8	>64.0	32.5	>64.0	>64.0	>1.6	Nd	>2.0	Nd
Ficus vallis-choudae Del.	Sb (EtOH 70%)	23.7	19.2	20.7	16.3	23.2	1.0	1.2	1.1	1.4
Grewia villosa Willd.	L (EtOH 70%)	24.0	21.8	>64.0	34.00	>64.0	>2.7	>2.9	Nd	>1.9
Guiera senegalensis J.F.Gmel.	L (EtOH 70%)	2.1	2.00	20.7	23.0	21.2	9.9	10.7	1.0	0.9
Hymenocardia acida Tul.	L (Hexane)	8.1	8.2	32.5	33.1	32.2	4.0	3.9	1.0	1.0
Hymenocardia acida	Sb (MeOH)	8.6	>64.0	32.5	>64.0	55.2	6.5	<0.9	1.7	<0.9
Hymenocardia acida	Sb (H_2O)	37.3	>64.0	>64.0	11.0	55.2	1.5	<0.9	<0.9	5.0
Hymenocardia acida	Sb (Hexane)	32.2	35.5	>64.0	>64.0	>64.0	>2.0	>1.8	Nd	Nd
Hymenocardia acida	L (MeOH)	>64.0	>64.0	>64.0	>64.0	>64.0	Nd	Nd	Nd	Nd
Lantana camara L.	L (MeOH)	8.2	7.9	32.5	24.4	18.2	2.2	2.3	0.6	0.7
Lawsonia inermis L.	L (MeOH)	8.3	31.1	32.5	23.4	41.9	5.0	1.3	1.3	1.8
Margaritaria discoidea (Baill.) Webster	L (MeOH)	32.9	37.1	>64.0	>64.0	>64.0	>1.9	>1.7	Nd	Nd
Margaritaria discoidea	L ($CHCl_3$)	2.0	32.7	>64.0	>64.0	>64.0	>31.8	>1.9	Nd	Nd
Markhamia tomantosa (Benth.) K. Schum.	L (EtOH 70%)	24.0	26.1	>64.0	27.5	>64.0	>27	>2.4	Nd	>2.3
Mezoneuron benthamianum Baill.	L (MeOH)	30.1	35.3	32.5	5.8	>64.0	>2.1	>1.8	>2.0	>11.0
Morinda geminata DC.	Rb (EtOH 70%)	21.0	25.8	>64.0	17.9	22.4	1.1	0.9	<0.3	1.2
Newbouldia laevis (P. Beauv.) Seem.	Rb (MeOH)	>64.0	8.4	32.5	9.1	15.3	<0.2	1.8	0.5	1.7
Paullinia pinnata L.	L (EtOH 70%)	22.4	14.5	>64.0	17.3	>64.0	>29	>4.4	Nd	>3.7
Pavetta sp	Sb (alkaloids. $CHCl_3$)	1.8	33.5	20.3	34.3	>64.0	>34.8	>1.9	>3.1	>1.9
Pavetta crassipes K.Schum.	L ($CHCl_3$)	2.0	2.2	20.3	31.4	8.9	4.5	4.1	0.4	03

Pavetta crassipes	L (alkaloids. $CHCl_3$)	34.0	20.4	>64.0	4.9	>64.0	>1.9	>3.1	Nd	>13.0
Phyllanthus niruri L.	Wp ($CHCl_3$)	1.8	33.5	32.5	>64.0	>64.0	>34.8	>1.9	>2.0	Nd
Phyllanthus niruri	Wp (MeOH)	2.1	59.2	50.8	>64.0	>64.0	>30.6	>1.1	>1.3	Nd
Phyllanthus amarus Schumach.	Wp ($CHCl_3$)	7.2	37.5	32.5	48.2	>64.0	>8.9	>1.7	>2.0	>1.3
Phyllanthus amarus	Wp (MeOH)	13.5	40.6	32.5	42.3	>64.0	>4.7	>1.6	>2.0	>1.5
Piliostigma thonningii (Schumach.) Milne-Redhead	L (EtOH 70%)	29.9	>64.0	>64.0	33.6	>64.0	>2.1	Nd	Nd	>1.9
Rhaphiostylis beninensis (Hook f.) Planch.	L (MeOH)	>64.0	46.5	32.5	>64.0	>64.0	Nd	>14	>2.0	Nd
Pseudospondias microcarpa Engl.	Sb (MeOH)	>64.0	34.3	>64.0	>64.0	>64.0	Nd	>1.9	Nd	Nd
Spondias mombin L.	L (Hexane)	10.9	22.2	32.2	24.2	24.2	2.2	1.1	0.7	1.0
Spondias mombin	Sb (Hexane)	12.2	29.5	>64.0	>64.0	>64.0	>5.2	>2.2	Nd	Nd
Spondias mombin	L (MeOH)	22.0	31.1	>64.0	2.8	>64.0	>2.9	>2.0	Nd	>23.0
Spondias mombin	Sb (MeOH)	8.5	33.2	>64.0	34.8	>64.00	>7.5	>1.9	Nd	>1.8
Spondias mombin	Sb (H_2O)	2.3	35.8	>64.0	59.5	>64.00	>27.2	>1.8	Nd	>1.1
Strophanthus hispidus DC.	Rb (MeOH)	>64.0	>64.0	>64.0	>64.0	>64.0	Nd	Nd	Nd	Nd
Terminalia albida Sc. Elliot	L (EtOH 70%)	21.0	20.5	20.7	29.7	>64.0	>3.0	>3.1	>3.1	>2.1
Terminalia albida	Sb (MeOH)	35.5	>64.0	32.5	0.6	>64.0	>1.8	Nd	>2.0	>100.0
Terminalia macroptera Guill.	Rb (EtOH 70%)	2.7	20.2	20.7	6.8	>64.0	>23.3	>3.2	>3.1	>9.3
Tetracera alnifolia Willd.	L ($CHCl_3$)	20.2	40.0	32.5	>64.0	>64.0	>3.2	>1.6	>2.0	Nd
Tetracera alnifolia	L (MeOH)	28.1	>64.0	8.1	>64.0	>64.0	>2.3	Nd	>7.8	Nd
Tetracera alnifolia	L (H_2O)	>64.0	>64.0	>64.0	>64.0	>64.0	Nd	Nd	Nd	Nd
Trichilia emetica Vahl.	Sb (EtOH 70%)	24.8	22.8	>64.0	15.5	>64.0	>2.6	>2.8	Nd	>4.1
Uapaca togoensis Pax.	Sb (MeOH)	35.5	>64.0	32.5	>64.0	>64.0	>1.8	Nd	>2.0	Nd
Uapaca togoensis	Sb ($CHCl_3$)	>64.0	>64.0	>64.0	>64.0	>64.0	Nd	Nd	Nd	Nd

Vismia guineensis (L.) Choisy	L ($CHCl_3$)	20.7	25.1	20.7	20.7	50.0	2.4	2.0	2.4	2.4
Vismia guineensis	L (MeOH)	2.05	6.80	20.72	9.16	14.24	6.94	2.09	0.68	1.55
Vismia guineensis	L (H_2O)	26.1	>64.0	>64.0	46.1	35.5	1.4	<0.5	<0.5	0.8
Vismia guineensis	Sb ($CHCl_3$)	15.2	2.3	20.7	1.9	11.9	0.8	5.2	0.6	6.2
Vismia guineensis	Sb (MeOH)	6.7	2.1	20.7	3.0	8.6	1.3	4.0	0.4	2.8
Vismia guineensis	Sb (H_2O)	28.0	23.5	20.7	56.2	>64.0	>2.3	>2.7	>3.1	>1.1
Vismia guineensis	Rb ($CHCl_3$)	2.1	2.0	20.7	1.9	5.2	2.4	2.5	0.2	2.6
Vismia guineensis	Rb (MeOH)	2.4	2.3	20.7	1.8	16.4	6.8	7.1	0.8	9.0
Vismia guineensis	Rb (H_2O)	26.5	23.1	20.7	>64.0	31.7	1.2	1.4	1.5	<0.5
Ximenia americana L.	Sb (MeOH)	37.3	32.3	32.5	>64.0	>64.0	>1.7	>2.0	>2.0	Nd
Zanthoxylum zanthoxyloides (Lam.) Zepernick & Timber	Rb (MeOH)	38.0	22.2	>64.0	>64.0	>64.0	1.7	2.9	Nd	Nd
Chloroquine					0.047 µM					
Suramin		0.035 µM								
Benznidazol			2.0 µM							
Miltefosine				6.1 µM						
Tamoxifen						11.0 µM				

Legend: Nd : not determined ; Nt : not tested. Tbb: *Trypanosoma brucei brucei*. T.cruzi: *Trypanosoma cruzi*. L.inf : *Leishmania infantum* Pf: *Plasmodium falciparum*. L: Leaves Rb: Root bark. Sb: Stem bark. Wp: Whole plant.