

Biological Activities for Extracts of Guacatonga (*Casearia sylvestris*)

Plant Part - Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Dried Leaf Brazil	Toxicity Assessment (quantitative)	ETOH(75%)Ext	Intragastric Rat	LD50 >1840 mg/kg	Inactive	No toxicity noted.	M25176
Dried Leaf Brazil	Cytotoxic	ETOH(100%)Ext	Cell Culture	Not stated	Strong Activity	Several cancer cell lines.	H06829
Dried Leaf Paraguay	Antitumor Activity	ETOH(100%)Ext	Not stated Mouse	100 mg/kg	Strong Activity	Sarcoma 180 (ASC).	H04119
Dried Leaf Brazil	Antitumor Activity	ETOH Ext + Fractions	Cell Culture	Not stated	Active	Several cancer lines tested with isolated diterpenes from plant.	K10958
Leaf Paraguay	Antitumor Activity	ETOH(95%)Ext	IP Mouse	100 mg/kg	Active	Sarcoma 180 (ASC).	H07106
Dried Leaf Paraguay	Antitumor Activity	ETOH(100%)Ext	Cell Culture	Not stated	Active	Several cancer cell lines.	M30433
Leaf + Twig Ecuador	Antitumor Activity	MEOH(75%)Ext	Cell Culture	Not stated	Active	KB cell cytotoxicity against a panel of tumor cell lines including human lung, colon, and ovarian cancer.	H29066
Leaf + Twig Ecuador	Antitumor Activity	Fraction: Casearvestrin A	Cell Culture	IC50=.54 u/m IC50=.71 u/m IC50=.82 u/m	Active Active Active	Human lung cancer cells Human colon cancer cells Human ovarian cancer cells	H29066
Leaf + Twig Ecuador	Antitumor Activity	Fraction: Casearvestrin B	Cell Culture	IC50=.20 u/m IC50=.25 u/m IC50=.32 u/m	Active Active Active	Human lung cancer cells Human colon cancer cells Human ovarian cancer cells	H29066
Leaf + Twig Ecuador	Antitumor Activity	Fraction: Casearvestrin C	Cell Culture	IC50=.29 u/m IC50=.26 u/m IC50=.42 u/m	Active Active Active	Human lung cancer cells Human colon cancer cells Human ovarian cancer cells	H29066
Dried Leaf Brazil	Cytotoxic Activity	MEOH(75%)Ext	Cell Culture	1000 mcg/ml	Inactive	Cells-vero. (Healthy cells)	L05437
Dried Leaf Brazil	Antiviral Activity	ETOH(100%)Ext	Human Adult (3 patients)	Topical application	Active	<i>Herpes simplex 1</i> .	BB1007
Dried Leaf Brazil	Antiviral Activity	MEOH(75%)Ext	Cell Culture	500 mcg/ml	Inactive	<i>Virus Herpes simplex 1</i> and <i>Herpes simplex 2</i> in vero cells.	L05437

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Bark + Leaf Brazil	Analgesic Activity	Infusion	Intragastric Mouse	1.0 gm/kg	Active	vs. acetic acid-induced writhing	J12450
Bark + Leaf Brazil	Anti-inflammatory Activity	Infusion	Intragastric Mouse	1.0 gm/kg	Weak activity	By dye diffusion assay	J12450
Dried Leaf Brazil	Antiulcer Activity	ETOH(70%)Ext	Intragastric Rat	57.5 mg/kg	Active	vs. stress-induced ulcers (water-immersion) & vs. stress-induced(restraint) ulcers	M25176
Dried Leaf Brazil	Antiulcer Activity	ETOH(75%)Ext	Intragastric Rat	57.5 mg/kg and 44.3 mg/kg	Active	vs. <i>H. pylorus</i> ligation-induced ulcers, vs. stress-induced ulcers(water-immersion), and vs. acetic acid-induced ulcers	L08768
Dried Leaf Brazil	Gastric Secretory Inhibition	ETOH(75%)Ext	Intragastric Rat	57.5 mg/kg	Active	vs. <i>H. pylorus</i> ligation-induced ulcers	M25176
Dried Leaf Brazil	Anti-inflammatory Activity	Hydroalcoholic	IP Mouse	300 mg/kg 100 mg/kg	Active Active	Inhibited induced inflammation at the same rate as the drugs Piroxicam and Meloxicam.	BB1002
Leaf + Twig Ecuador	Antifungal Activity	MEOH(75%)Ext Individual fractions	Disk diffusion	EC50= 0.34 to 1.4 mcg/ml	Active	<i>Aspergillus niger</i>	H29066
Dried Leaf Brazil	Antifungal Activity	CH2CL2:MEOH (1:1) Ext	TLC Plate	1 mg/.10 ml	Inactive	<i>Cladosporium sphaerospermum</i>	BB1006
Dried Leaf Brazil	Antibacterial Activity	CH2CL2:MEOH (1:1) Ext	Agar plate	5 mg/plate	Active	<i>Bacillus cerus</i>	BB1006
Not specified Brazil	Antibacterial Activity	Not stated	In vitro Disc	Not stated	Active Inactive Inactive Inactive	<i>Bacillus subtilis</i> <i>Escherichia coli</i> <i>Staphylococcus aureus</i> <i>Streptococcus faecalis</i>	T15630
Dried Leaf Brazil	Antibacterial Activity	CH2CL2:MEOH (1:1) Ext	Agar plate	5 mg/plate	Inactive	<i>Staphylococcus aureus</i> <i>Escherichia coli</i> <i>Pseudomonas aeruginosa</i>	BB1006

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Dried Leaf Brazil	Phospholipase A2 Inhibition Activity / Antivenin Activity	ETOH Ext	Cell Culture	1:5 ratio	Active	Inhibited PLA 2 by 64% for <i>Bothrops jararacussu</i> venom and 48% for <i>Lachesis muta</i> venom.	BB1004
Dried Leaf Brazil	Antivenin Effect	H2O Ext	Not stated	Variable	Active	Extract neutralized the hemorrhagic, coagulant and proteolytic activity on casein or fibrinogen induced by five snake venoms and two bee venoms.	L19078
Dried Leaf Brazil	Antivenin Effect	H2O Ext	Mouse	Not stated	Active	vs. activity of venoms.	L16542
Dried Leaf Brazil	Phospholipase A2 Inhibition	H2O Ext	Not stated	Not stated	Active	vs. activity of venoms containing Class I, II, and III Pla2.	L16542
Dried Leaf Brazil	Collagen fibril (type I) reticulation stimulation	ETOH(75%)Ext	Intragastric Rat (male)	57.5 mg/kg & 44.3 mg/kg	Active	vs. acetic acid-induced ulcers	L08768
Dried Leaf Brazil	DNA Nicking Activity	MEOH:CH2CL2 (1:1) Ext	Not stated	Not stated	Active	vs. repair deficient mutant yeast RS 322YK.	H23337
Dried part not specified Brazil	Antimalarial Activity	ETOH(95%)Ext Hexane Ext	Intragastric Mouse	100 mg/kg 100 mg/kg	Inactive Inactive	vs. <i>Plasmodium berghei</i> (daily dosing for 4 days)	K07977
Dried part not specified Brazil	Antimycobacterial Activity Antiyeast Activity	Not stated	Disk diffusion	Not stated	Inactive Inactive	<i>Mycobacterium smegmatis</i> <i>Candida albicans</i>	T15630
Dried stem Brazil	Antimalarial Activity	CHCL3 Ext H2O Ext	SC Chicken Oral Chicken	580.0 mg/kg 4.88 gm/kg	Inactive Inactive	<i>Plasmodium gallinaceum</i>	A00785
Dried Leaf Belize	Antispasmodic Activity	Hot H2O Ext	Not stated Rat (Aorta)	300 ul	Inactive	vs. norepinephrine and carbachol induced contractions	L16245
Dried Leaf Brazil	Molluscicidal Activity	CH2CL2:MEOH (1:1) Ext	Agar plate	100 ppm	Inactive	<i>Artemia salina</i> & <i>B. glabra</i>	BB1006

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