Technical Data Report

for

ANAMU

Petiveria alliacea

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Anamu

Preprinted from *Herbal Secrets of the Rainforest,* 2nd edition, by Leslie Taylor

Family: Phytolaccaceae

Genus: *Petiveria*

Species: *alliacea*

Synonyms: *Mapa graveolens Vell., P. corrientina Rojas, P. foetida Salisb., P. graveolens (Vell.) Stellfeld, P. hexandria, P. paraguayensis*

Common Names: Anamu, apacin, apacina, apazote de zorro, aposin, ave, aveterinaryte, calauchin, chasser vermine, congo root, douvant-douvant, emeruaiuma, garlic weed, guinea henweed, guine, guinea, guinea hen leaf, gully root, herbe aux poules, hierba de las gallinitas, huevo de gato, kojo root, kuan, kudjuruk, lemtewei, lemuru, mal pouri, mapurit, mapurite, mucura-caa, mucura, mucuracáa, ocano, payche, pipi, tipi, verbena hedionda, verveine puante, zorrillo

Part Used: Whole Herb

Anamu is an herbaceous perennial that grows up to a meter in height. It is indigenous to the Amazon rainforest and tropical areas of Central and South America, the Caribbean, and Africa. It is sometimes called “garlic weed” as the plant, and especially the roots, have a strong garlic odor.

Called *mucura* in the Peruvian Amazon, it is used as part of an herbal bath against witchcraft by the Indians and local jungle herbal healers called *curanderos*. In Ka'apor Indian ethnobotany, it is called mikur-ka'a, which means opossum-herb, and it is used for both medicine and magic. The Caribs in Guatemala crush the root and inhale it for sinustitis and the Ese’Ejas Indians in the Peruvian Amazon prepare a leaf infusion for colds and flu. The Garifuna indigenous people in Nicaragua also employ a leaf infusion or decoction for colds, coughs, aches and pains, as well as in magic rituals. The root is thought to be more powerful than the leaves; it is considered anesthetic, analgesic, and is often used in the rainforest in topical remedies for the skin. Other indigenous Indian groups beat the leaves into a cataplasm and use it externally for headache, rheumatic pain, and other types of pain. This same jungle remedy is also used as an insecticide.

Anamu has a long history in herbal medicine in all of the tropical countries where it grows. In Brazilian herbal medicine it is called *tipi,* and is considered as anantispasmodic, diuretic, emmenagogue, stimulant, and sudorific. Herbalists and natural health practitioners use anamu there for edema, arthritis, malaria, rheumatism, poor memory, and as a topical analgesic and anti-inflammatory for skin afflictions. The traditional remedy calls for a decoction or infusion prepared with 30 grams of dried anamu whole herb in a liter of wate; 1/4 cup dosages are taken 1–3 times daily or used topically (depending on the condition treated). Throughout Central America, anamu is used by women to relieve birthing pains and facilitate easy childbirth as well as to induce abortions. In Guatemalan herbal medicine, the plant is called *apacín* and a leaf decoction is taken internally for digestive ailments and sluggish digestion, flatulence, and fever. A leaf decoction is also used externally as an analgesic for muscular pain and for skin diseases. Anamu is commonly used in big cities and towns in South and Central America as a natural remedy for treating colds, coughs, influenza, respiratory and pulmonary infections, cancer, and to support the immune system. In Cuba, herbalists decoct the whole plant and use it to treat cancer, diabetes, and as an anti-inflammatory and abortive.

Many biologically active compounds have been discovered in anamu including flavonoids, triterpenes, steroids, and sulfur compounds. In the first published study on toxicity in 1992 by Colombian researchers, they noted that, at high dosages, anamu extract delayed cell proliferation

but did not inhibit mitosis *in vitro*. In mice they noted a change in bone marrow cells; however, they were using 100 to 400 times the traditional human dosage to get those results.[1] In two independent studies published later by other researchers, oral doses of leaf and root extracts did not cause any toxicity in rats and mice at up to 5 grams per kilogram of body weight.[2,3] Methanol extracts of the plant did, however, cause uterine contractions in an early study,[4] which can lead to abortion—one of its well documented uses in traditional herbal medicine.

The research published on anamu (and several active phytochemical compounds discovered in it) reveals that it has a broad range of therapeutic effects including antileukemic, antitumorous, and cytotoxic activities against several types of cancer cells. In an *in vitro* study by Italian researchers in 1990, water extracts and ethanol extracts demonstrated an ability to retard the growth of several strains of cancerous tumor cells and leukemia cells.[5] They followed up their research with another study in 1993, showing that the same extracts had a cytotoxic effect (or the ability to actually kill some of these cancer cells rather than just retard their growth). This study indicated that anamu (whole herb) water extracts were toxic to leukemia and lymphoma cancer cells but only inhibited the growth of breast cancer cells.[6] More recently, a study published in 2002 documented an *in vitro* cytotoxic effect against a liver cancer cell line;[7] another in 2001 documented an *in vitro* ability to retard the growth of brain cancer cells.[8] The Germans documenting its activity with brain cancer cells related its actions to a specific sulfur compound found in anamu named *dibenzyl trisulfide*. Interestingly, this same chemical was the subject of other (nearly concurrent) research in the United States. In a plant screening program performed at the University of Illinois at Chicago (which evaluated over 1400 plant extracts as novel therapies for the prevention and treatment of cancer), anamu was one of 34 plants identified with active properties against cancer. In their research, they also identified this same sulfur compound as being one of two of the active compounds in anamu they tested for anticancerous actions.[9] Anamu also contains the phytochemicals *astilbin*, *benzaldehyde,* and *coumarin,* however; all three have been documented with antitumorous and/or anticancerous properties as well.[10-12]

In addition to its documented anticancerous properties, anamu has also been verified *in vivo* and *in vitro* for its immunostimulant properties. In a 1993 study, a water extract demonstrated the ability to stimulate lymphocyte and Interleukin II production in mice.[13] In the same year, another study with mice demonstrated that an anamu extract increased natural killer cell activity by 100% and stimulated Interferon, Interleukin II, and Interleukin 4 production.[14] Ongoing research from 1997 to 2001 continues to substantiate anamu's *in vivo* immunostimulant properties,[15-17] including one human study.[17]

Anamu's traditional use as a remedy for arthritis and rheumatism has been validated by clincial research which confirms its analgesic and anti-inflammatory properties. One research group in Sweden reported that anamu possesses cyclooxygenase-1 (COX-1) inhibititory actions.[18] COX-1 inhibitors are the new (and highly profitable) class of arthritis drugs being sold today by pharmaceutical companies. Another research group in Brazil documented significant anti-inflammatory effects in rats using various models,[3,19,20] and researchers in 2002 noted a significant analgesic effect in rats with pleurisy.[21] The analgesic and anti-inflammatory effects were even verified when an ethanol extract was applied topically in rats (which validated the traditional use also).[22]

Many clinical reports and studies document that anamu shows broad-spectrum antimicrobial properties against numerous strains of bacteria, viruses, fungi, and yeast. In a recent 2002 study, research showed that anamu extracts inhibited bovine viral diarrhea virus replication (which is also a viral model for hepatitis C virus).[23] A Cuban research group documented anamu's antimicrobial properties *in vitro* against numerous pathogens, including *E. coli*, *Staphylococcus, Pseudomonas.,* and *Shigella* and, interestingly enough, their crude water extracts performed better than any of the alcohol extracts.[24] A German group documented good activity against several gram-positive and gram-negative bacteria, *Mycobacterium tuberculosis*, several strains of fungi, and *Candida*.[25] Its

antifungal properties were documented by one research group in 1991,[26] and again by a separate research group in 2001.[27] Researchers from Guatemala and Austria documented anamu's antimicrobial properties, publishing separate studies in 1998 confirming its activity *in vitro* and *in vivo* against several strains of protozoa, bacteria, and fungi.[28,29]

While anamu has not been used widely employed for diabetes, it has been clinically documented to have hypoglycemic actions. Researchers in 1990 demonstrated the *in vivo* hypoglycemic effect of anamu, showing that sugar levels in the blood decreased by more than 60% after one hour of administration to mice. This does reflect herbal medicine practice in Cuba; they have used anamu as an herbal aid for diabetes for many years.[30] With the many documented properties and actions of this tropical plant, it is no wonder that anamu has enjoyed such a long history of use in herbal medicine. As research on this plant's attributes continues, it quantifies and qualifies the richness of indigenous herbal traditions.

Documented Properties and Actions: Abortifacient, analgesic, anthelmintic, antibacterial, antifungal, anti-inflammatory, antileukemic, antimycobacterial, antioxidant, antiproliferative, antipyretic, antirheumatic, antispasmodic, antitumorous, antiviral, antiyeast, anxiolytic, cytostatic, cytotoxic, diuretic, emmenagogue, hypoglycemic, immunostimulant, insecticide, stimulant, sedative, sudorific, vermifuge

Main Phytochemicals: Allantoin, astilbin, barbinervic acid, benzylhydroxytrisulfide, coumarin, daucosterol, dibenzyl sulfide, engeletin, friedelinol, ilexgenin A, leridal, leridol, lignoceric acid, linoleic acid, myricitrin, nonadecanoic acid, oleic acid, palmitic acid, petiveral, pinitol, proline, sitosterol, stearic acid, trithiolaniacine

Traditional Remedy: Thirty grams of whole herb infused or decocted in 1 liter of water with dosages of 1/4 cup twice daily. Since most of the chemicals are water soluble, powdered whole herb in tablets or capsules (1–3 grams) daily can be substituted if desired.

Contraindications:

- Methanol extracts of Anamu have demonstrated the ability to cause uterine contractions, which can lead to abortion—one of its documented uses in traditional human medicine. As such, Anamu is contraindicated for use by pregnant women.
- Anamu contains a low concentration of coumarin which has an anticoagulant effect. People with blood disorders such as hemophilia, or people on blood thinning medications should not use this plant without the supervision and advice of a qualified health care practitioner.
- This plant has been documented with hypoglycemic effects in mice. People with hypoglycemia and diabetes should not use this plant unless they are under the care of a health practitioner to monitor the effects on their blood sugar levels.

Drug Interactions: None published however, it is conceivable that the use of this plant may potentiate coumadin (Warfarin®) drugs due to its natural coumarin content.

WORLDWIDE ETHNOBOTANICAL USES

Country	Uses
Argentina	Antiseptic, colds, diarrhea, diuretic, emmenagogue, febrifuge, headache, respiratory tract infections, rheumatism, swellings, toothache, urinary infections
Brazil	Abortive, analgesic, anthelmentic, antirheumatic, asthma, anti-inflammatory, antispasmodic, arthritis, emmenagogue, cancer, diabetes, diaphoretic, diuretic, fever, headache, inflammation, insecticide, malaria, osteoartritis, poison (arrow), repellant (bat), rheumatism, sedative, spasm, toothache, venereal disease, vermifuge
Colombia	Dentition (caries prevention), parturition, snakebite
Cuba	Abortive, anti-inflammatory, cancer, diabetes
Guatemala	Abscesses, ache (stomach), blood disorders, dermatitis, diarrhea, emmenagogue, erysipelas, fever, furuncles, headache, inflammation (skin), menstruation, pimples, pustules, ringworm, sinusitis, skin disease, skin eruptions, skin fungus, stomach cramps, scrofula
Latin America	Abortifacient, depurative, diuretic, emmenagogue, expectorant, hysteria, nerve, spasm, sudorific, vermifuge
Mexico	Abortifacient, boils, catarrh, childbirth, cold, depurative, diuretic, ecbolic, emmenagogue, epilepsy, expectorant, fever, headache, heat rash, hives, hysteria, influenza, nerve, paralysis, pimples, pustules, rabies, repellant (insect), rheumatism, spasm, sudorific, toothhache, tumor, venereal, vermifuge
Nicaragua	Aches, colds, coughs, heart, kidneys, liver, pains, pulmonary disorders, respiratory disorders, snakebite
Paraguay	Abortive, digestive diseases, emmenagogue, fever, flu, insecticide, pain (muscular), sinusitis, skin disease, toothache
Puerto Rico	Abortive, cholera, childbirth, emmenagogue, fever
Peru	Colds, flu, hallucinogenic
Trinidad	Abortifacient, counter-irritant, cystitis, decoagulant, depurative, dysmenorrhea, flu, head cold, venereal, womb
Venezuela	Abortifacient, caries, depurative, emmenagogue, root canal, spasm, sudorific, vermifuge
West Indies	Abortive, diaphoretic, diuretic, emmenagogue, parturition
Elsewhere	Abortifacient, ache (head), analgesic, anthelmentic, antirheumatic, asthma, anti-inflammatory, antispasmodic, aphrodisiac, cancer, colds, counterirritant, diaphoretic, diuretic, dysmenorrhea, ecbolic, emmenagogue, expectorant, fever, heachache, insecticide, lung, nerve, parturition, pertussis, piscicide, repellant (bat), repellant (insect), rheumatism, sedative, snakebite, spasm, sudorific, toothache, venereal disease, vermifuge

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Ethnomedical Information on Anamu (Petiveria alliacea)

Plant Part / Location	Documented Ethnic Use	Type Extract Route	Used For	Ref #
Aerial Parts Bolivia	Used for colds.	Aerial Parts Oral	Human Adult	L03868
Aerial Parts Brazil	Used for toothache.	Not Stated Oral	Human Adult	T08730
Aerial Parts Colombia	Used for snakebite. Decoction taken before childbirth to relieve pains and facilitate delivery.	Infusion External Hot H2O Ext Oral	Human Adult Human(pregnant)	L15991 A00710
Aerial Parts Paraguay	Used as an insecticide.	Not Stated External	Human Adult	K18765
Entire Plant Brazil	Used as an abortive. Used as a diaphoretic and diuretic. Used as an antirheumatic. Used for headache.	Hot H2O Ext Oral Hot H2O Ext Oral Infusion Oral Infusion Oral	Human(pregnant) Human Adult Human Adult Human Adult	W02290 W02290 M27460 K16654
Entire Plant Colombia	Used to prevent tooth decay by blackening teeth. Fresh material is chewed.	Plant Oral	Human Adult	T09203
Entire Plant Cuba	Used as an abortive. Used to treat cancer. Used for diabetes and as an anti-inflammatory.	Decoction Oral Decoction Not stated Decoction Oral	Human(pregnant) Human Adult Human Adult	K07661
Entire Plant Dominica	A tea is used as an aid to women in parturition.	Hot H2O Ext Oral	Human(pregnant)	W01267
Entire Plant Guatemala	Used as a remedy for stomach cramps and diarrhea.	Hot H2O Ext Oral	Human Adult	W01280
Entire Plant Guyana	Decoction drunk to induce abortion.	Hot H2O Ext Oral	Human(pregnant)	M01437
Entire Plant Mexico	Used to treat pimples. (Used in the bath while bathing.) Used as an abortifacient. Used as an emmenagogue. Used to calm pain of childbirth and to hasten birth.	Plant External Hot H2O Ext Oral Hot H2O Ext Oral Infusion Oral	Human Adult Human(pregnant) Human (female) Human(pregnant)	K16948 W02855 W02855 T08771
Entire Plant Nicaragua	Used for colds, for the heart, the kidneys, and the liver. Used for snakebite. Used for toothache. Used for aches and pains, respiratory & pulmonary disorders.	Plant Not Stated Plant External Plant Oral Decoction Oral	Human Adult Human Adult Human Adult Human Adult	K26492 K26492 K26492 L16047

Plant Part / Location	Documented Ethnic Use	Type Extract Route	Used For	Ref #
Entire Plant West Indies	A tea is used as an aid to women in parturition. Used as an abortive. Used as a diaphoretic and diuretic.	Hot H2O Ext Oral Hot H2O Ext Oral Hot H2O Ext Oral	Human(pregnant) Human(pregnant) Human Adult	T00701 W02290 W02290
Leaf Argentina	Used to treat colds. Used against diarrhea, to treat respiratory tract infections, and to treat urinary tract infections.	Infusion Oral Decoction Oral	Human Adult Human Adult	L04223 K17523
Leaf Brazil	Used for rheumatism and for cancerous conditions. Said to be insecticidal.	Hot H2O Ext Oral Leaves Not stated	Human Adult Not stated	M24758 T15975
Leaf French Guiana	Used as a diuretic. Fresh leaves used for an analgesic.	Hot H2O Ext Oral Hot H2O Ext Oral	Human Adult Human Adult	J10155 M18488
Leaf Guatemala	Used to induce menstruation. Used for headache. Used for stomachache. Used for fever. Used for ringworm and skin fungal diseases. Used for blood disorders. Used for skin diseases and irritations, pimples, pustules, skin eruptions, erysipelas, dermatitis, skin inflammation, abscesses, furuncles, and scrofula.	Hot H2O Ext Oral Leaves External Decoction Oral Decoction External Hot H2O Ext Leaves Oral Infusion External	Human Adult Human Adult Human Adult Human Adult Human Adult Human Adult Human Adult	A04161 K28434 K28434 K28434 M27151 J14071 T15445
Leaf Haiti	Used for headache. Used for edema. Used as a mouthwash for tooth pain.	Leaves Inhalation Decoction Oral Leaves Maceration	Human Adult Human Adult	T13846 T13846
Leaf Mexico	Used to treat epilepsy. Leaves rubbed on body for hives, heat rash, boils, and pustules.	Infusion Oral Leaves External	Human Adult Human Adult	K16948 T08016
Leaf Nicaragua	Used for aches and pains. Used for colds. Used for coughs. Used for rituals.	Infusion External Decoction Oral Infusion Oral Infusion Not stated	Human Adult Human Adult Human Adult Human Adult	K27070 K27070 K27070 K27070
Leaf Peru	Used for colds.	Leaves Oral	Human Adult	K28202
Leaf Puerto Rico	Said to cure cholera.	Hot H2O Ext Oral	Human Adult	A03452
Leaf + Stem Jamaica	Used as an abortifacient.	Infusion Oral	Human(pregnant)	K29710

Plant Part / Location	Documented Ethnic Use	Type Extract Route	Used For	Ref #
Leaf + Stembark Panama	Used for ritual ceremonies.	Decoction Oral	Human Adult	T16730
Leaf + Stem Puerto Rico	Used for fevers.	Hot H2O Ext Oral	Human Adult	A04418
Leaf + Stem West Indies	Used as a diuretic, an emmenagogue, as an abortifacient.	Hot H2O Ext Oral	Human Adult	T05032
Part Not Stated Argentina	Used as an emmenagogue, antirheumatic, febrifuge, and diuretic.	Not stated Oral	Human Adult	K03244
Part Not Stated Brazil	Used as an abortifacient by the rural populace. Used to treat malaria. Used as an insecticide.	Not stated Not stated Oral Not stated External	Human(pregnant) Human Adult Human Adult	J01423 J14512 K18765
Part Not Stated Paraguay	Used as an abortifacient and emmenagogue by the rural populace.	Not stated	Human(pregnant)	J01423
Part Not Stated Venezuela	Used as an emmenagogue.	Hot H2O Ext Oral	Human Adult	T15375
Root Argentina	Used for toothache. Used for headaches, toothaches, and swellings and as an antiseptic.	Root Periodontal Smoke Inhalation	Human Adult Human Adult	K23834 K23834
Root Brazil	Used for malaria, fevers, as an abortifacient & diuretic. Used for fevers, as an anthelmentic, antispasmodic, and as an abortive. Used as a diuretic, sedative, antispasmodic, anthelmintic, and antiinflammatory. Used as an abortive, diuretic, antirheumatic and against venereal diseases and headaches.	Infusion Oral Hot H2O Ext Oral Infusion Oral Decoction Oral	Human Adult Human Adult Human Adult Human Adult	L15570 W00375 K18484 T15975
Root Cuba	Used as a powerful abortifacient.	Hot H2O Ext Oral	Human(pregnant)	A04490 W02855
Root + Stem Guatemala	Used for sinusitis.	Powder Inhalation	Human Adult	K26154
Root French Guiana	Used as an emmenagogue and an abortifacient.	Not stated Oral	Human Adult	A04994
Root Mexico	Used to treat influenza. Inhalation of the root is recommended - this could be snuff or smoke.	Root Inhalation	Human Adult	K16948

Plant Part / Location	Documented Ethnic Use	Type Extract Route	Used For	Ref #
Root Paraguay	Used for flu. Used for skin diseases and muscular pains. Used for digestive diseases, fever, and sinusitis.	Root Juice Oral Decoction External Decoction Oral	Human Adult Human Adult Human Adult	T14623 K26154 K26154
Root Puerto Rico	Used as an emmenagogue and an abortifacient. Said to cure cholera.	Hot H2O Ext Oral Hot H2O Ext Oral	Human Adult Human Adult	A03452 A03452
Root Trinidad	Used as an abortifacient.	Hot H2O Ext Oral	Human Adult	K03665
Root USA-TX	Used as an emmenagogue and an abortifacient.	Hot H2O Ext Oral	Human Adult	A05958
Root Virgin Islands	Used for headaches. Used for dysmenorrhea, and as a abortifacient.	Hot H2O Ext Oral Hot H2O Ext Oral	Human Adult Human Adult	W00903 T00701

Presence of Compounds in Anamu (Petiveria alliacea)

Compound	Chemical Type	Plant Part	Plant Origin	Quantity	Ref #
Allantoin	Alkaloid	Stem Leaf	Brazil Brazil	Not Stated Not Stated	H07043 H07043
Astilbin	Flavonoid	Leaf	Colombia	00.006%	H09229
Barbinervic Acid	Triterpene	Aerial Parts	Colombia	Not Stated	H17953
Barbinervic Acid,monomethyl:	Triterpene	Aerial Parts	Colombia	Not Stated	H17953
Benzyl-2-hydroxy-5-ethyl-trisulfide	Sulfur Compound	Root + Stem	Mexico	00.003%	A04680
Benzyl-hydroxy-methyl Sulfide	Sulfur Compound	Root	Brazil	Not Stated	H28091
Coumarin		Root	Not Stated	Not Stated	AB1003
Daucosterol	Steroid	Aerial Parts	Colombia	Not Stated	H17953
Di(benzyl-trithio)-methane	Sulfur Compound	Root	Brazil	Not Stated	H28091
Dibenzyl Disulfide	Sulfur Compound	Root	Brazil	Not Stated	H28091
Dibenzyl Sulfide	Sulfur Compound	Root	Brazil	Not Stated	H28091
Dibenzyl Tetrasulfide	Benzenoid	Root	Brazil	Not Stated	H28091
Dibenzyl Trisulfide	Sulfur Compound	Root Root	Brazil Brazil	00.0875% Not Stated	H07043 H28091
Dipropyl Disulfide	Sulfur Compound	Root	Brazil	Not Stated	H28091
Engeletin	Flavonoid	Leaf	Colombia	00.00923%	H09229
Friedelinol,alpha:	Triterpene	Leaf	Brazil	Not Stated	H07043
Ilexgenin A,3-epi:	Triterpene	Aerial Parts	Colombia	Not Stated	H17953

Compound	Chemical Type	Plant Part	Plant Origin	Quantity	Ref #
KNO3	Inorganic	Root Stem Leaf	Brazil	Not Stated	H07043
Leridal	Flavanone	Leaf Aerial Parts	Colombia Columbia	00.00923% Not Stated	H09229 H17953
Leridal,7-demethyl:	Flavanone	Aerial Parts	Colombia	Not Stated	H17953
Leridal-chalcone	Flavonoid	Aerial Parts	Colombia	Not Stated	H17953
Leridol	Flavanone	Leaf	Colombia	00.00461%	H09229
Leridol-5-methyl Ether	Flavanone	Leaf	Colombia	00.00384%	H09229
Lignoceric Acid	Lipid	Stem	Brazil	Not Stated	H07043
Lignoceryl Alcohol	Alkanol C5 or More	Leaf	Brazil	Not Stated	H07043
Lignoceryl Lignocerate	Lipid	Leaf	Brazil	Not Stated	H07043
Linoleic Acid	Lipid	Leaf	Brazil	Not Stated	H07043
Myricitrin	Flavonol	Leaf	Colombia	00.00384%	H09229
Nonadecanoic Acid	Lipid	Leaf	Brazil	Not Stated	H07043
Oleic Acid	Lipid	Leaf	Brazil	Not Stated	H07043
Palmitic Acid	Lipid	Leaf	Brazil	Not Stated	H07043
Petiveral	Flavanone	Aerial Parts	Colombia	Not Stated	H17953
Petiveral,4-ethyl:	Flavanone	Aerial Parts	Colombia	Not Stated	H17953
Pinitol	Carbohydrate	Inflorescence	Brazil	Not Stated	H07043
Proline,trans-n-methyl-4-methoxy:	Alkaloid	Stem	Brazil	00.04005%	H07043
Sitosterol,beta:	Steroid	Root Aerial Parts Stem	Brazil Colombia Brazil	Not Stated Not Stated Not Stated	H07043 H17953 H07043

Compound	Chemical Type	Plant Part	Plant Origin	Quantity	Journal Ref*
S-benzyl-L-cysteine sulfoxide	Sulfur Compound	Root Stem Leaf	Not Stated	00.07%	AB1002
Stearic Acid	Lipid	Leaf	Brazil	Not Stated	H07043
Trithiolaniacine	Lipid	Root	Not Stated	Not Stated	AB1003
2-phenylmethyldithioethanol	Lipid	Not Stated	Not Stated	Not Stated	AB1005

OTHER PHYTOCHEMICAL SCREENING:

ALKALOIDS ABSENT	ROOT	W00375	FLAVONOIDS ABSENT	ROOT	W00375
	LEAF + STEM	A04418	GLUCOSINOLATES ABSENT	ENTIRE PLANT	W03866
ALKALOIDS PRESENT	LEAF	K03244	QUINONES ABSENT	ROOT	W00375
	ROOT	K03244	SAPONINS ABSENT	ROOT	W00375
	ENTIRE PLANT	L16047	STEROLS ABSENT	ROOT	W00375
COUMARINS PRESENT	ROOT	W00375	TRITERPENES ABSENT	ROOT	W00375
ESSENTIAL OILS ABSENT	ROOT	W00375	TANNINS ABSENT	ROOT	W00375

Biological Activities for Extracts of Anamu (Petiveria alliacea)

IN VIVO RESEARCH

Plant Part - Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Leaf Guatemala	Toxicity Assessment (quantitative)	CH2CL2 Ext	Intragastric Mouse	LD50 > 5.0 gm/kg	Inactive		L11987
Leaf Guatemala	Toxicity Assessment (quantitative)	CH2CL2 Ext	IP Mouse	LD50 > 500 mg/kg	Inactive		L11987
Root Brazil	Toxicity Assessment (quantitative)	Hydro-alcoholic Ext	Intragastric Rat	LD50 >1.27 kg/kg	Inactive		K22724
Root Brazil	Irritant Activity	ETOH (70%) Ext	External Rat	10%	Inactive	Following 15 days of application	K18484
Entire Plant Brazil	Analgesic Activity	Hot H2O Ext	Human Adult	15 gm/liter	Equiv.	A one-week cross-over double blind trial of the analgesic effects of given extract in 22 patients with hip and knee osteoarthritis. Significant reductions in pain in both the experimental and placebo treatment, and no significant difference between these two regimes.	M27460
Entire Plant Colombia	Cell proliferation inhibition	ETOH(95%)Ext	Intragastric Mice	1.0 mg/kg	Active	Bone Marrow	K07464
Entire Plant	Lymphokine-activated killer cells enhancement	Decoction	IP MIce	Not Stated	Active	Lymphokinine activated killer (LAK) cells	K10677
Entire Plant	Natural killer cell enhancement	Decoction	IP Mice	Not Stated	Active	Natural killer cell activity was increased 100%.	K10677
Leaf + Stem Jamaica	Phagocytosis Stimulation	Hexane Ext	Human Adult	1 mg/ml	Active	Cells-granulocyte-human	K29710
Rootbark	Phagocytosis Stimulation	ETOH(95%)Ext	IP Mice	0.5 ml / animal	Weak Activity		T07238

GI = Gastric Intubation IG = Intragastric NG = Nasogastric IP = Intraperitoneally IV = Intravenously SC = Subcutaneously IM = Intramuscular

Plant Part - Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Rootbark	Phagocytosis Stimulation	Unsaponifiable Fraction	IP Mice	0.5 ml / animal	Active		T07238
Leaf + Stem Jamaica	Immunomodulator Activity	Hexane Ext	IP Mice	23 mg/kg	Active	Increased thymic and Peyer's patches weights.	K29710
Leaf + Stem Jamaica	Immunomodulator Activity	Hexane Ext	IP Mice	23 mg/kg	Active	Increased % Granulocytes	K29710
Leaf Brazil	Immunomodulator Activity	Not Stated	Mice	Not Stated	Active	Increased hematopoiesis, the number of granulocyte/ macrophage colonies and serum colony stimulating activity in mice infected with Listeria monocytogenes.	AB1006
Root Brazil	Interferon-gamma production stimulation	ETOH (70%) Ext	Intragastric Mice	1000 mg/kg	Active	Cells-mouse-spleen	L18407
Root Brazil	Interleukin-2 formation stimulation	ETOH (70%) Ext	Intragastric Mice	1000 mg/kg	Active	Cells-mouse-spleen	L18407
Root Brazil	Interleukin 10 secretion stimulation	ETOH (70%) Ext	Intragastric Mice	1000 mg/kg	Inactive	Cells-mouse-spleen	L18407
Root Brazil	Interleukin-4 formation stimulation	ETOH (70%) Ext	Intragastric Mice	1000 mg/kg	Inactive	Cells-mouse-spleen	L18407
Root Brazil	Natural killer cell enhancement	ETOH (70%) Ext	Intragastric Mice	1000 mg/kg	Active	Cells-mouse-spleen	L18407
Fresh Leaf Brazil	Analgesic Activity	ETOH-H2O(1:1) Ext	Intragastric Mice	1.0 gm/kg	Active	vs. writhing test.	M18488
Fresh Leaf Brazil	Analgesic Activity	ETOH-H2O(1:1) Ext	Intragastric Mice	1.0 gm/kg	Inactive	vs. tail flick test	M18488
Root Brazil	Analgesic Activity	Lyophilized Ext	Oral Rat	43.9 mg/kg	Active		AB1001
Root Brazil	Anti-inflammatory Activity	Lyophilized Ext	Oral Rat	43.9 mg/kg	Active	Significant reduction in the number of migrating neutrophils, mononuclear cells and eosinophils.	AB1001

Plant Part - Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Root Brazil	Anti-inflammatory Activity	ETOH(70%) Ext	External Rat	.94 mg/ear	Active	vs. croton oil-induced irritation. Results significant at P < 0.05 Level.	K18484
Root Brazil	Anti-inflammatory Activity	ETOH(70%) Ext	External Rat	31.4 mg/kg	Active	vs. cotton pellet granuloma. 25.7% inhibitory effects after 7 days of treatment. Results significant at P < 0.05 Level.	K18484
Root Brazil	Anti-inflammatory Activity	Hydro-alcoholic Ext	Intragastric Rat	31.4 mg/kg	Active	vs. carrageenan-induced pedal edema. Results significant at P < 0.05 Level	K22724
Root Brazil	Anti-inflammatory Activity	Hydro-alcoholic Ext	Intragastric Rat	31.4 mg/kg	Weak Activity	17.0% inhibition vs. cotton pellet granuloma.	K22724
Root Brazil	Anti-inflammatory Activity	Hydro-alcoholic Ext	Intragastric Rat	31.4 mg/kg	Active	vs. nystatin induced edema.	K22724
Entire Plant Peru	Anti-inflammatory Activity	ETOH(100%)Ext	External Rat	0.8 mg/ear	Inactive	vs. EPP-induced rat ear edema	L14626
Root Brazil	Ulcerogenic Activity	Hydro-alcoholic Ext	Intragastric Rat	31.4 mg/kg	Inactive		K22724
Leaf + Stem Jamaica	Uterine Stimulant Effect	Hot H2O Ext	Rat female	33 ml/liter	Weak Activity	Uterus (unspec.cond)	A03361
Seed Nigeria	Uterine Stimulant Effect	MEOH Ext	Rat Female	1 mg/ml	Active	Uterus (unspec.cond)	J19979
Root Cuba	Hypoglycemic Activity	Aqueous-alcoholic Ext	Intragastric mice	0.1 gm/animal	Inactive		K07661
Stem Cuba	Hypoglycemic Activity	Aqueous-alcoholic Ext	Intragastric Mice	0.1 gm/animal	Active		K07661
Leaf Cuba	Hypoglycemic Activity	Aqueous-alcoholic Ext	Intragastric Mouse	0.1 gm/animal	Active		K07661
Entire Plant Brazil	Antistress Activity	Hydro-alcoholic Ext	Intragastric Rat	600.0 mg/kg	Active	Mucosa (gastric)	L18434
Entire Plant Brazil	Anxiolytic Effect	Hydro-alcoholic Ext	Intragastric Rat	600.0 mg/kg	Active		L18434
Leaf Guatemala and Root Guatemala	CNS depressant activity	H2O Ext Hexane Ext MEOH Ext	IP Mice	1.25 gm/kg	Equiv.		L15527

Plant Part - Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Root Not Specified	Antiimplantation Effect	ETOH (95%) Ext	SC Rat	Not stated	Inactive		X01111
Not Stated Brazil	Antirheumatic Effect	Hot H2O Ext	Human Adult	Not stated	Equiv.	Osteoarthritis Treatment lasted 14 days.	AB1008
Root Brazil and Leaf Brazil	Antinociceptive Activity	Hot H2O Ext	Mice36. 6 kg	Not Stated	Active	Antinociceptive effect in acetic acid–acetylcholine and hypertonic saline– induced abdominal pain	AB1009

IN VITRO RESEARCH

Plant Part - Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Leaf Brazil	Antiproliferation Activity	ETOH(95%)Ext	Cell Culture	Not stated	Active Active Active Active Active	CA-IMA CA-MAMMARY-MCF-7 Cells-DAUDI CELLS-MOLT 4 LEUK-K562	M24758
Leaf Brazil	Antiproliferation Activity	H2O Ext	Cell Culture	Not stated	Active Active Active Active Active	CA-IMA CA-MAMMARY-MCF-7 Cells-DAUDI CELLS-MOLT 4 LEUK-K562	M24758
Leaf Brazil	Antiproliferation Activity	Powder	Cell Culture	Not stated	Active Active Active Inactive	Cells-DAUDI CELLS-MOLT 4 LEUK-K562 CA-MAMMARY-MCF-7	M24758
Entire Plant	Cytotoxic Activity	Alcohol Ext	Cell Culture	1 mcg/ml	Active	Cells-DAUDI Lymphocytes-human-leukemic-IM9	K10386
Entire Plant	Cytotoxic Activity	Decoction	Cell Culture	1 mcg/ml	Active	Cells - DAUDI Cells - MOLT-4 Lymphocytes-human-leukemic-IM9	K10386
Entire Plant	Cytotoxic Activity	Infusion	Cell Culture	1 mcg/ml	Active	Cells - DAUDI Cells - MOLT-4 Lymphocytes-human-leukemic-IM9	K10386
Entire Plant	Cytotoxic Activity	Infusion	Cell Culture	1 mcg/ml	Inactive	CA-MAMMARY-MCF-7	K10386
Entire Plant	Cytotoxic Activity	Decoction	Cell Culture	1 mcg/ml	Inactive	CA-MAMMARY-MCF-7	K10386
Entire Plant	Cytotoxic Activity	Alcohol Ext	Cell Culture	1 mcg/ml	Inactive	CA-MAMMARY-MCF-7 Cells - MOLT-4	K10386
Entire Plant Argentina	Cytotoxic Activity	MEOH Ext	Cell Culture	Not stated	Active	Human hepatocellular carcinoma cell line.	AB1020

Plant Part - Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Not Stated Germany	Cytostatic Activity	Decoction + fractions	Cell and Tissue Culture	Not stated	Active	SH-SY5Yd neuroblastoma cells	AB1004
Not Stated USA	Anticarcinogenesis Activity	Not Stated	Cell Culture	ED50 <8 mg/ml	Active	HL-60 promyelocytic cells	AB1005
Entire Plant	Immunostimulant Activity	Decoction	Cell Culture	100 mcg/ml	Active	Splenocytes(mouse)	K10676
Entire Plant	Interferon induction stimulation	Decoction	Cell Culture	Not Stated	Active	Cells - CTLL-2	K10677
Entire Plant	Interleukin II receptor gene stimulation	Decoction	Cell Culture	Not Stated	Active	Splenocytes(mouse)	K10676
Entire Plant	Interleukin-4 formation stimulation	Decoction	Cell Culture	Not Stated	Active	Cells - CTLL-2	K10676
Entire Plant	Interleukin-II formation stimulation	Decoction	Cell Culture	Not Stated	Active	Cells - CTLL-2	K10676
Entire Plant	Lymphocyte stimulation	Decoction	Cell Culture	100 mcg/ml	Active	Splenocytes(mouse)	K10676
Entire Plant Colombia	Cell proliferation inhibition	ETOH(95%)Ext	Cell Culture	100 mcg/ml	Active	Lymphocytes-human	K07464
Entire Plant Colombia	Sister chromatid exchange stimulation	ETOH(95%)Ext	Cell Culture	1.0 mcg/ml	Active	Lymphocytes-human	K07464
Entire Plant Peru	Prostaglandin synthesis inhibition	ETOH(100%)Ext	Not Stated	100 mcg/ml	Active	vs. COX-1 Catalysed Prostaglandin Biosynthesis.	L14626
Root + Stem Mexico	Antibacterial Activity	ETOH-H2O(1:1) Ext	Agar Plate	Not stated	Active	vs. several Gram + and - bacteria	A04680
Leaf Cuba	Antibacterial Activity	Acetone Ext	Agar Plate	Not Stated	Active	*Pseudomonas aeruginosa* *Salmonella newport* *Sarcina lutea* *Serratia marcescens* *Shigella flexneri 3a*	K09163
Leaf Cuba	Antibacterial Activity	Acetone Ext	Agar Plate	Not Stated	Inactive	*Escherichia coli* *Propionibacterium acnes* *Salmonella typhosa* *Shigella flexneri* *Staphylococcus albus* *Staphylococcus aureus*	K09163

Plant Part - Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Leaf Cuba	Antibacterial Activity	H2O Ext	Agar Plate	Not Stated	Active	*Escherichia coli* *Propionibacterium acnes* *Pseudomonas aeruginosa* *Sarcina lutea* *Shigella flexneri*	K09163
Leaf Cuba	Antibacterial Activity	ETOH(95%)Ext	Agar Plate	Not Stated	Active	*Pseudomonas aeruginosa*	K09163
Leaf Cuba	Antibacterial Activity	ETOH(95%)Ext	Agar Plate	Not Stated	Inactive	*Escherichia coli* *Propionibacterium acnes* *Salmonella newport* *Salmonella typhosa* *Sarcina lutea* *Serratia marcescens* *Shigella flexneri* *Shigella flexneri 3a* *Staphylococcus albus* *Staphylococcus aureus*	K09163
Leaf Cuba	Antibacterial Activity	H2O Ext	Agar Plate	Not Stated	Inactive	*Salmonella newport* *Salmonella typhosa* *Serratia marcescens* *Shigella flexneri 3A* *Staphylococcus albus* *Staphylococcus aureus*	K09163
Leaf Guatemala	Antibacterial Activity	CH2CL2 Ext ETOH(100%) Ext H2O Ext	Agar Plate	MIC >10.0 mg/ml	Inactive	*Pseudomonas aeruginosa* *Salmonella typhi* *Staphylococcus aureus*	L11987
Leaf Guatemala	Antibacterial Activity	ETOH-H2O Ext 50%	Agar Plate	50.0 ml	Inactive	*Escherichia coli* *Salmonella typhosa* *Shigella flexneri*	K24899
Leaf Guatemala	Antibacterial Activity	ETOH(100%) Ext	Agar Plate	30.0 ml / disc	Inactive	*Escherichia coli* *Pseudomonas aeruginosa* *Staphylococcus aureus*	T15445
Leaf Argentina	Antibacterial Activity	Decoction	Agar Plate	Not stated	Inactive	*Pseudomonas aeruginosa*	K17523
Leaf Argentina	Antibacterial Activity	H2O Ext	Agar Plate	1.0 mg/ml	Inactive	*Salmonella typhi*	J11153

Plant Part - Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Leaf Argentina	Antibacterial Activity	H2O Ext	Agar Plate	62.5 mg/ml	Inactive	*Escherichia coli* *Staphylococcus aureus*	K14683
Stem Cuba	Antibacterial Activity	H2O Ext	Agar Plate	Not stated	Active	*Escherichia coli* *Pseudomonas aeruginosa* *Serratia marcescens* *Shigella flexneri* *Staphylococcus aureus*	K09163
Stem Cuba	Antibacterial Activity	Acetone Ext	Agar Plate	Not stated	Active	*Propionibacterium acnes* *Pseudomonas aeruginosa* *Salmonella typhosa* *Shigella flexneri 3a*	K09163
Stem Cuba	Antibacterial Activity	Acetone Ext	Agar Plate	Not stated	Inactive	*Escherichia coli* *Salmonella newport* *Sarcina lutea* *Serratia marcescens* *Shigella flexneri* *Staphylococcus albus* *Staphylococcus aureus*	K09163
Stem Cuba	Antibacterial Activity	ETOH(95%)Ext	Agar Plate	Not stated	Active	*Escherichia coli* *Propionibacterium acnes* *Salmonella newport* *Salmonella typhosa* *Sarcina lutea* *Serratia marcescens* *Shigella flexneri* *Shigella flexneri 3a*	K09163
Stem Cuba	Antibacterial Activity	H2O Ext	Agar Plate	Not stated	Inactive	*Propionibacterium acnes* *Salmonella newport* *Salmonella typhosa* *Sarcina lutea* *Shigella flexneri 3a* *Staphylococcus albus*	K09163
Leaf Puerto Rico	Antimycobacterial Activity	ETOH (95%) Ext	Agar Plate	Not Stated	Inactive	*Mycobacterium tuberculosis*	L12432

Plant Part - Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Root + Stem Mexico	Antimycobacterial Activity	ETOH-H2O(1:1) Ext	Agar Plate	Not stated	Active	*Mycobacterium tuberculosis*	A04680
Root Brazil	Antiyeast Activity	CH2CL2/MEOH (2:1) Ext	Agar Plate	Not stated	Active	*Saccharomyces cerevisiae*	
Leaf Guatemala	Antiyeast Activity	CH2CL2 Ext CH2CL2 Ext ETOH(100%) Ext ETOH(100%) Ext H2O Ext H2O Ext	Agar Plate Agar Plate Agar Plate Agar Plate Agar Plate Agar Plate	MIC 5.0 mg/ml MIC>10.0 mg/ml MIC>10.0 mg/ml MIC>10.0 mg/ml MIC>10.0 mg/ml MIC>10.0 mg/ml	Active Inactive Inactive Inactive Inactive Inactive	*Cryptococcus neoformans* *Candida albicans* *Candida albicans* *Cryptococcus neoformans* *Candida albicans* *Cryptococcus neoformans*	L11987
Root + Stem Mexico	Antiyeast Activity	ETOH-H2O(1:1) Ext	Agar Plate	Not stated	Active	*Candida albicans*	A04680
Root Brazil	Antifungal Activity	CH2CL2/MEOH (2:1) Ext	Agar Plate	Not stated	Active	*Cladosporium cladosporioides, C. sphaerospermum*	H28091
Root + Stem Mexico	Antifungal Activity	ETOH-H2O(1:1) Ext	Agar Plate	Not stated	Active	vs. several plant pathogenic fungi	A04680
Leaf Guatemala	Antifungal Activity	CH2CL2 Ext ETOH(100%) Ext H2O Ext	Agar Plate	MIC >10.0 mg/ml	Inactive	*Aspergillus flavus* *Microsporum gypseum*	L11987
Leaf Guatemala	Antifungal Activity	Hot H2O Ext	Broth Culture	1 ml / disc	Active	*Epidermophyton floccosum*	M27151
Leaf Cuba	Antifungal Activity	Acetone Ext ETOH(95%)Ext H2O Ext	Agar Plate	Conc Used 50%	Inactive	*Neurospora crassa*	T08589
Leaf Guatemala	Antifungal Activity	Hot H2O Ext	Broth Culture	1 ml / disc	Inactive	*Microsporum canis* *Microsporum gypseum* *Trichophyton mentagrophytes* *Trichophyton rubrum*	M27151
Leaf Argentina	Antifungal Activity	H2O Ext	Agar Plate	62.5 mg/ml	Inactive	*Aspergillus niger*	K14683
Stem Cuba	Antifungal Activity	H2O Ext Acetone Ext ETOH(95%) Ext	Agar Plate	50%	Inactive	*Neurospora crassa*	T08589

Plant Part - Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Leaf + Stem Argentina	Antiviral Activity	Ethyl acetate Dichloromethane	Agar Plate	EC(50) 25 mcg/ml EC(50) 43 mcg/ml	Active	vs. bovine viral diarrhea virus (viral model of the *Hepatitis C* virus)	X00001
Leaf + Stem Argentina	Antiviral Activity	Ethyl acetate CH2CL2 Ext	Plaque Assay	EC(50) 25 mcg/ml EC(50) 43 mcg/ml	Inactive	*Herpes simplex 1*, *Poliovirus type 1, Adenovirus serotype 7 and Vesicular stomatitis virus type 1*	X00001
Aerial Parts Bolivia	Antioxidant Activity	CH2CL2 Ext	Not stated	IC50 >1000 mg/ml	Inactive	Measured by quenching of luminol-enhanced chemiluminescence	L03868
Aerial Parts Bolivia	Antioxidant Activity	H2O Ext	In vitro	IC50 >1000 mg/ml	Inactive	Measured by quenching of luminol-enhanced chemiluminescence	L03868
Aerial Parts Bolivia	Antioxidant Activity	MEOH Ext	In vitro	IC50 126 mg/ml	Active	Measured by quenching of luminol-enhanced chemiluminescence	L03868
Leaf Guatemala	Antitrypanosomal Activity	CH2CL2 Ext ETOH Ext	In vitro In vitro	MIC 1.0 mg/ml MIC 1.0 mg/ml	Active Inactive	vs. Trypanosoma cruzi	L11987
Leaf Guatemala Root Guatemala	Antitrypanosomal Activity	ETOH (95%) Ext H2O Ext Hexane Ext	In vitro In vitro In vitro	IC90 1000 mcg/ml IC90 1000 mcg/ml IC 90 285 mcg.ml	Inactive Inactive Active	vs. Trypanosoma cruzi	L08927
Fresh Entire Plant Puerto Rico	Molluscicidal Activity	Aqueous Slurry (homogenate)	In vitro	LD100 >1m ppm	Inactive	Fruits, roots and leaves were tested against Lymnaea columella and L cubensis	T04621
Leaf Peru	Anticrustacean Activity	CH2CL2 Ext	In vitro	ED50 = 499.0 mcg/ml	Weak Activity	Against Artemia salina (assay system is intended to predict for antitumor activity)	K28202
Leaf Peru	Anticrustacean Activity	MEOH Ext	In vitro	ED50 > 1000 mcg/ml	Inactive	Against Artemia salina (assay system is intended to predict for antitumor activity)	K28202

Plant Part - Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Leaf Guatemala	Anticrustacean Activity	CH2CL2 Ext ETOH(100%) Ext H2O Ext Hexane Ext	In vitro	LC50 >1000 ppm	Inactive	Artemia salina larvae	L11987 L08927
Branch + Leaf Colombia	Antivenin Effect	ETOH(100%) Ext	Not stated	Not Stated	Inactive	vs. bothrops Atrox Venom	L15991
Not Stated Puerto Rico	Antimalarial Activity	ETOH (95%) Ext	Not Stated	IC50>65 mcg/ml	Inactive	Plasmodium falciparum	K16971
Not Stated Brazil	Insecticide Activity	ETOH (95%) Ext Pet ether Ext	Not Stated	50 mcg	Inactive	Rhodnius neglectus	K18765
Root Brazil	Antimitotic Effect	Hydroethanol Ext Ether	Cell Culture	ED50 = 45.02 mcg/ml ED50 = 12.40mcg/ml	Weak Activity	Sea urchin egg development	AB1007

Biological Activities of Chemicals found in Anamu (Petiveria alliacea)

Chemical Tested	Activity Tested For	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Dipropyl disulfide	Hypocholesterolemic	Cell Culture	EC < or = 0.5 mmol/L IC > or = 1.0 mmol/L	Active	Rat hepatocytes. Concentration dependent reduction in cholesterol synthesis.	AB1015
Astilbin	Cytotoxic Activity	Cell Culture	Not Stated	Active	Exposure of phytohemaggluctinin-activated Jurkat cells to astilbin induced dose-dependent apoptosis.	AB1019
Astilbin	Antioxidant Activity	Tissue	Not Stated	Active	Maintained clarity of rat lens in hyperglycemia. Inhibited recombinant human aldose reductase. Inhibited sorbitol accumulation in human red blood cells.	AB1013
Astilbin	Insecticide Activity	Larval and pupal masses	Not Stated	Active	Anticarsia gemmatalis Spodoptera frugiperda	AB1010
Astilbin	Hypocholesterolemic Effect	Rat	Not Stated	Active	Reduced total liver cholesterol and liver phospholipid concentration. Lowered serum and liver TBAR concentration. Did not influence liver or serum antioxidant enzymes.	AB1014
Astilbin	Hepatoprotective	Rat	40 mg/kg	Active	Astilbine restored lipoperoxides and tissue prostanoids to basal values.	AB1012

GI = Gastric Intubation IG = Intragastric NG = Nasogastric IP = Intraperitoneally IV = Intravenously SC = Subcutaneously IM = Intramuscular

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AB1010	BIOLOGICAL ACTIVITY OF ASTILBIN FROM DIMORPHANDRA MOLLIS AGAINST ANTICARSIA GEMMATALIS AND SPODOPTERA FRUGIPERDA. BATISTA PEREIRA,LG: PETACCI,F: FERNANDES,JB: CORREA,AG: VIEIRA,PC: DA SILVA,MF: MALASPINA,O: PEST MANAG SCI 58 5: 503-7 (2002) (DEPARTAMENTO DE QUIMICA, BRAZIL)

AB1011	ASTILBIN SELECTIVELY INDUCES DYSFUNCTION OF LIVER-INFILTRATING CELLS–NOVEL PROTECTION FROM LIVER DAMAGE. XU,Q: WU,F: CAO,J: CHEN,T: JIANG,J: SAIKI,I: KODA,A: EUR J PHARMACOL 377 1: 93-100 (1999) (DEPT PHARM FOR CHINESE MED, NANJING)
AB1012	PROSTANOIDS AND FREE RADICALS IN C14C-INDUCED HEPATOTOXICITY IN RATS: EFFECT OF ASTILBIN. CLOSA,D: TORRES,M: HOTTER,G: BIOQUE,G: LEON,OS: GELPI,E: ROSELLO-CATAFAU,J: PROSTAGLANDINS LEUKOT ESSENT FATTY ACIDS 56 4: 331-4 (1997) (DEPT MED BIOANALYSIS, SPAIN)
AB1013	INHIBITION OF ALDOSE REDUCTASE AND SORBITOL ACCUMULATION BY ASTILBIN AND TAXIFOLIN DIHYDROFLAVONOLS IN ENGELHARDTIA CHRYSOLEPIS. HARAGUCHI,H: OHMI,I: FUKUDA,A: TAMURA,Y: MIZUTANI,K: TANAKA,O: CHOU,WH: BIOSCI BIOTECHNOL BIOCHEM 61 4: 651-4 (1997) (FACULTY OF ENGINEERING, JAPAN)
AB1014	EFFECT OF ASTILBIN IN TEA PROCESSED FROM LEAVES OF ENGELHARDTIA CHRYSOLEPIS ON THE SERUM AND LIVER LIPID CONCENTRATIONS AND ON THE ERYTHROCYTE AND LIVER ANTIOXIDATIVE ENZYME ACTIVITIES OF RATS. IGARASHI,K: UCHIDA,Y: MURAKAMI,N: MIZUTANI,K: MASUDA,H. BIOSCI BIOTECHNOL BIOCHEM 60 3: 513-5 (1996) (DEPT BIOPROD, JAPAN)
AB1015	INHIBITION OF CHOLESTEROL BIOSYNTHESIS BY ORGANOSULFUR COMPOUNDS DERIVED FROM GARLIC. LIU,L: YEH,YY: LIPIDS 35 2: 197-203 (2000) (GRADUATE PROG IN NUTR, USA)
AB1016	INSULIN-LIKE EFFECT OF PINITOL. BATES,SH: JONES,RB: BAILEY,CJ: BR J PHARMACOL 130 8: 1944-8 (2000) (SCHOOL OF LIFE AND HEALTH SCI, USA)
AB1017	EFFECT OF PINITOL TREATMENT ON INSULIN ACTION IN SUBJECTS WITH INSULIN RESISTANCE. DAVIS,A: CHRISTIANSEN,M: HOROWITZ,JF: KLEIN,S: HELLERSTEIN,MK: OSTLUND,RE. DIABETES CARE 23 7: 1000-5 (2000) (DEPT PEDIATRICS, USA)
AB1018	BETA-SITOSTEROL INHIBITS HT-29 HUMAN COLON CANCER CELL GROWTH AND ALTERS MEMBRANE LIPIDS. AWAD,AB: CHEN,YC: FINK,CS: HENNESSEY,T: ANTICANCER RES 16 5A: 2797-804 (1996) (STATE UNI OF NY, BUFFALO, USA)
AB1019	ASTILBIN SELECTIVELY FACILITATES THE APOPTOSIS OF INTERLEUKIN-2-DEPENDENT PHYTOHEMAGGLUTININ-ACTIVATED JURKAT CELLS. YAN,R: XU,Q: PHARMACOL RES. 44 2: 135-9 (2001) (DEPT PHARM FOR CHINESE MATERIA MEDICA, CHINA PHARM UNI, NANJING)
AB1020	CYTOTOXIC EFFECT OF ARGENTINE MEDICINAL PLANT EXTRACTS ON HUMAN HEPATOCELLULAR CARCINOMA CELL LINE. RUFFA MJ, FERRARO G, WAGNER ML, CALCAGNO ML, CAMPOS RH, CAVALLARO L. J ETHNOPHARMACOL 2002 MAR;79(3):335-9 (FACULTAD DE FARMACIA Y BIOQUIJMICA, CATEDRA DE VIROLOGIJA, UNIVERSIDAD DE BUENOS AIRES, CAPITAL FEDERAL, ARGENTINA.)
A00710	FLORA MEDICINAL DE COLOMBIA. VOL. 1. UNIVERSIDAD NACIONAL, BOGOTA. GARCIA-BARRIGA,H: BOOK : - (1974) (SEC BOTANICA INST DE CIENC NAT UNIV NACL COLOMBIA BOGOTA COLOMBIA)
A03361	FURTHER PHARMACOLOGICAL SCREENING OF SOME WEST INDIAN MEDICINAL PLANTS. FENG,PC: HAYNES,LJ: MAGNUS,KE: PLIMMER,JR: J PHARM PHARMACOL 16 : 115- (1964) (UNIV WEST INDIES KINGSTON 7 JAMAICA)

A03452	THE BOTANY AND VEGETABLE MATERIA MEDICA OF THE ISLAND OF PUERTO RICO. AMADEO,AJ: PHARM J TRANS 18 : 906- (1888) (NO ADDRESS GIVEN)
A04161	THE CHORTI INDIANS OF GUATEMALA. UNIV CHICAGO PRESS,CHICAGO,USA. WISDOM,C: BOOK : - (1940) (NO ADDRESS GIVEN)
A04418	LOCAL "FEVER" PLANTS TESTED FOR PRESENCE OF ALKALOIDS. LOUSTALOT,AJ: PAGAN,C: EL CRISOL(PUERTO RICO) 3 5: 3- (1949) (NO ADDRESS GIVEN)
A04490	SOME CUBAN MEDICINAL PLANTS. CONTRIBUTIONS FROM THE BOTANICAL DEPARTMENT OF IOWA COLLEGE OF AGRICULTURE AND MECHANIC ARTS. NO 5. COMBS,R: BOOK : - (1897) (NO ADDRESS GIVEN)
A04680	ISOLATION, STRUCTURE ELUCIDATION AND SYNTHESIS OF AN ANTIMICROBIAL SUBSTANCE FROM PETIVERIA ALLIACEA. VON SZCZEPANSKI,C: ZGORZELAK,P: HOYER,GA: ARZNEIM-FORSCH 22 : 1975- (1972) (RES LAB SCHERING AG BERLIN D-1000 GERMANY)
A04807	INSECTICIDAL TESTS OF PLANTS FROM TROPICAL AMERICA. SIEVERS,AF: ARCHER,WA: MOORE,RH: MC GOVRAN,BR: J ECON ENTOMOL 42 : 549- (1949) (DIV TOBACCO,MEDICINAL SP CROPS ARS USDA MAYAGUEZ PUERTO RICO)
A04994	LES PLANTES MEDICINALES ET TOXIQUES DE LA GUYANE FRANCAISE. PROTAT PRERES, MACON. HECKEL,E: BOOK : - (1897) (NO ADDRESS GIVEN)
A05958	INDEX OF THE PLANTS OF TEXAS WITH REPUTED MEDICINAL AND POISONOUS PROPERTIES. PUBLISHED BY THE AUTHOR. BURLAGE,HM: BOOK : - (1968) (COLL PHARM UNIV TEXAS AUSTIN TX USA)
H07043	DIBENZYL TRISULPHIDE AND TRANS-N-METHYL-4-METHOXYPROLINE FROM PETIVERIA ALLIACEA. DE SOUSA,JR: DEMUNER,AJ: PINHEIRO,JA: BREITMAIER,E: CASSELS,BK: PHYTOCHEMISTRY 29 11: 3653-3655 (1990) (DEPT QUIM UNIV FED MINAS GERAIS BELO HORIZONTE MG BRAZIL)
H09229	6-C-FORMYL AND 6-C-HYDROXYMETHYL FLAVANONES FROM PETIVERIA ALLIACEA. MONACHE,FD: SUAREZ,LEC: PHYTOCHEMISTRY 31 7: 2481-2482 (1992) (CENT CHIM RECETTORI IST CHIM U.C.S.C. ROME I-00168 ITALY)
H17953	PETIVERIA ALLIACEA: II. FURTHER FLAVONOIDS AND TRITERPENES. DELLE MONACHE,F: MENICHINI,F: SUAREZ,LEC: GAZZ CHIM ITAL 126 5: 275-278 (1996) (CNR CENT CHIM RECETORI ROME I-00168 ITALY)
H28091	ANTIFUNGAL POLYSULPHIDES FROM PETIVERIA ALLIACEA L. BENEVIDES,PJC: YOUNG,MCM: GIESBRECHT,AM: ROQUE,NF: BOLZANI,VDS: PHYTOCHEMISTRY 57 5: 743-747 (2001) (INST QUIM UNIV SAO PAULO SAO PAULO SP 05508 BRAZIL)
J01423	TWO HUNDRED SIXTY-EIGHT MEDICINAL PLANTS USED TO REGULATE FERTILITY IN SOME COUNTRIES OF SOUTH AMERICA. UNPUBLISHED (STENCILED) REVIEW IN SPANISH. MORENO A,R: BOOK : - (1975) (PARAGUAY)
J10155	NOTES ON THE TRADITIONAL PHARMACOPOEIA OF FRENCH GUYANA. LUU,C: PLANT MED PHYTOTHER 9 : 125-135 (1975) (LAB BOTANY INST BOTANY MONTPELLIER 34000 FRANCE)

J11153	IN VITRO ANTIBACTERIAL ACTIVITY OF ARGENTINE FOLK MEDICINAL PLANTS AGAINST SALMONELLA TYPHI. PEREZ,C: ANESINI,C: J ETHNOPHARMACOL 44 1: 41-46 (1994) (CATEDRA FARMA FAC ODONTOLOGIA UNIV BUENOS AIRES BUENOS AIRES ARGENTINA)
J14071	SCREENING OF 17 GUATEMALAN MEDICINAL PLANTS FOR PLATELET ANTIAGGREGANT ACTIVITY. VILLAR,R: CALLEJA,JM: MORALES,C: CACERES,A: PHYTOTHER RES 11 6: 441-445 (1997) (DEPT FARM FAC FARM UNIV SANTIAGO COMPOST SANTIAGO 15706 SPAIN)
J14512	MALARIA AND ANTIMALARIAL PLANTS IN RORAIMA, BRAZIL. MILLIKEN,W: TROP DOCTOR SUPPL 1997 : 20-25 (1997) (ROYAL BOT GARDENS CENT ECONOMIC BOT SURREY TW9 3AE ENGLAND)
J18332	DIVERSITY OF STEROL BIOSYNTHETIC CAPACITY IN THE CARYOPHYLLIDAE. SALT,TA: XU,S: PATTERSON,GW: ADLER,JH: LIPIDS 26 8: 604-613 (1991) (ARS USDA BELTSVILLE MD 20705 USA)
J19979	THE UTERINE CONTRACTILE EFFECT OF PETIVERIA ALLIACEA SEEDS. OLUWOLE,FS: BOLARINWA,AF: FITOTERAPIA 69 1: 3-6 (1998) (DEPT PHSICOL COLL MED UNIV IBADAN IBADAN NIGERIA)
K03244	SURVEY OF ARGENTINE MEDICINAL PLANTS. FOLKLORE AND PHYTOCHEMICAL SCREENING. II. BANDONI,AL: MENDIONDO,ME: RONDINA,RVD: COUSSIO,JD: ECON BOT 30 : 161-185 (1976) (DEPT BIOQUIM VEGETAL FAC FARM BIOQUIM UNIV BUENOS AIRES BUENOS AIRES ARGENTINA)
K03665	SOME FOLK MEDICINAL PLANTS FROM TRINIDAD. WONG,W: ECON BOT 30 : 103-142 (1976) (DEPT ANTHROPOLOGY BRANDEIS UNIV WALTHAM MA USA)
K07464	EVALUATION OF THE GENOTOXIC EFFECTS OF A FOLK MEDICINE, PETIVERIA ALLIACEAE (ANAMU). HOYOS,LS: AU,WW: HEO,MY: MORRIS,DL: LEGATOR,MS: MUTAT RES 280 1: 29-34 (1992) (DEPT BIOL UNIC CAUCA PAPAYAN COLOMBIA)
K07661	PETIVERIA ALLIACEAE L. (ANAMU). STUDY OF THE HYPOGLYCEMIC EFFECT. LORES,RI: PUJOL,MC: MED INTERNE 28 4: 347-352 (1990) (POSTGRADUATE DEPT INST SUPERIOR CIENCIAS MED HAVAN CUBA)
K09163	THE BIOLOGICAL ASSESSMENT OF CUBAN PLANTS.III. MISAS,CAJ: HERNANDEZ,NMR: ABRAHAM,AML: REV CUB MED TROP 31 1: 21-27 (1979) (DEPT MICROBIOL INST MED TROP PEDRO KOURI UNIV DE LA HABANA HAVANA CUBA)
K10386	IN VITRO ANTIPROLIFERATIVE ACTIVITY OF PETIVERIA ALLIACEA L. ON SEVERAL TUMOR CELL LINES. JOVICEVIC,L:TROIANI,MP: CAPEZZONE DE JOANNON,A: SASO,L: MAZZANTI,G: ROSSI,V: PHARMACOL RES 27 1: 105-106 (1993) (INST RICERA FRANCESCO ANGELINI ROME ITALY)
K10676	EFFECTS OF PETIVERIA ALLIACEA L. ON CELL IMMUNITY. ROSSI,V: MARINI,S: JOVICEVIC,L: D'ATRI,S: GIARDINA,B: PHARMACOL RES 27 1: 111-112 (1993) (INST RICERCA FRANCESCO ANGELINI SPA ROME ITALY)
K10677	EFFECTS OF PETIVERIA ALLIACEA L. ON CYTOKINE PRODUCTION AND NATURAL KILLER CELL ACTIVITY. MARINI,S: JOVICEVIC,L: MILANESE,C: GIARDINA,B: TENTORI,L: LEONE,MG: ROSSI,V: PHARMACOL RES 27 1: 107-108 (1993) (INST RICERCA FRANCESCO ANGELINI SPA ROME ITALY)

K14683	SCREENING OF PLANTS USED IN ARGENTINE FOLK MEDICINE FOR ANTIMICROBIAL ACTIVITY. ANESINI,C: PEREZ,C: J ETHNOPHARMACOL 39 2: 119-128 (1993) (CATEDRA FARMACOL FAC ODONTOL UNIV BUENOS AIRES AUENOS AIRES ARGENTINA)
K16654	PLANTS USED AS ANALGESICS BY AMAZONIAN CABOCLOS AS A BASIS FOR SELECTING PLANTS FOR INVESTIGATION. ELISABETSKY,E: CASTILHOS,ZC: INT J CRUDE DRUG RES 28 4: 309-320 (1990) (LAB ETNOFARMACOL CCB UNIV FED PARA PARA BRAZIL)
K16948	MEDICINAL PLANTS USED IN SOME RURAL POPULATIONS OF OAXACA, PUEBLA AND VERACRUZ, MEXICO. ZAMORA-MARTINEZ,MC: POLA,CNP: J ETHNOPHARMACOL 35 3: 229-257 (1992) (CENT INV FOREST AGROP DIS FED MEXICO 04110 MEXICO)
K16971	SCREENING OF THE FLORA OF PUERTO RICO FOR POTENTIAL ANTIMALARIAL BIOACTIVES. ANTOUN,MD: GERENA,L: MILHOUS,WK: INT J PHARMACOG 31 4: 255-258 (1993) (DEPT PHARM SCI SCH PHARM UNIV PUERTO RICO SAN JUAN 00936 PUERTO RICO)
K17523	INHIBITION OF PSEUDOMONAS AERUGINOSA BY ARGENTINEAN MEDICINAL PLANTS. PEREZ,C: ANESINI,C: FITOTERAPIA 65 2: 169-172 (1994) (CAT FARMACOL FAC ODONTOL UNIV BUENOS AIRES BUENOS AIRES ARGENTINA)
K18484	TOPICAL ANTI-INFLAMMATORY ACTIVITY AND TOXICITY OF PETIVERIA ALLIACEAE. GERMANO,DHP CALDEIRA,TTO: MAZELLA,AAG: SERTIE,JAA: BACCHI,EM: FITOTERAPIA 64 5: 459-467 (1993) (DEPT FAMACOL INST CIENC BIOMED UNIV SAO PAULO SAO PAULO 05508 BRAZIL)
K18765	A SCREENING METHOD FOR NATURAL PRODUCTS ON TRIATOMINE BUGS. SCHMEDA-HIRSCHMANN,G: ROJAS DE ARIAS,A: PHYTOTHERRES 6 2: 68-73 (1992) (INSTIT INVEST CIEN SALUD ASUNCION PARAGUAY)
K22724	PHARMACOLOGICAL ASSAY OF PETIVERIA ALLIACEA. II: ORAL ANTI-INFLAMMATORY ACTIVITY AND GASTROTOXICITY OF A HYDROALCOHOLIC ROOT EXTRACT. GERMANO,DHP: SERTIE,JAA: BACCHI,EM: FITOTERAPIA 66 3: 195-202 (1995) (INST QUIM UNIV SAO PAULO SAO PAULO SP 05508 BRAZIL)
K23834	MEDICINAL PLANTS OF THE PILAGA OF CENTRAL CHACO.FILIPOY,A: J ETHNOPHARMACOL 44 3: 181-193 (1994) (CENT EST FARMACO BOT BUENOS AIRES ARGENTINA)
K24899	PLANTS USED IN GUATEMALA FOR THE TREATMENT OF GASTROINTESTINAL DISORDERS. 1. SCREENING OF 84 PLANTS AGAINST ENTEROBACTERIA.CACERES,A: CANO,O: SAMAYOA,B: AGUILAR,L: J ETHNOPHARMACOL 30 1: 55-73 (1990) (CEMT APARTADO POSTAL 01001 GUATEMALA)
K26154	ETHNOBOTANICAL SURVEY OF THE MEDICINAL FLORA USED BY THE CARIBS OF GUATEMALA. GIRON,LM: FREIRE,V: ALONZO,A: CACERES,A: J ETHNOPHARMACOL 34 2/3: 173-187 (1991) (CENT MESOAMER STUD APPRO TECHN GUATEMALA CITY GUATEMALA)
K26492	MEDICINAL PLANTS OF NICARAGUA'S ATLANTIC COAST. BARRETT,B: ECON BOT 48 1: 8-20 (1994) (JOHNS HOPKINS UNIV HEALTH CHILD SURVIVAL FELLOW INCAP GUATEMALA GUATEMALA)
K27070	ETHNOBOTANY OF THE GARIFUNA OF EASTERN NICARAGUA. COEE,FG: ANDERSON,GJ: ECON BOT 50 1: 71-107 (1996) (SCH PHARM UNIV CONNECTICUT STORRS CT 06268 USA)

K28202	STUDIES ON THE CYTOTOXICITY, ANTIMICROBIAL AND DNA-BINDING ACTIVITIES OF PLANTS USED BY THE ESE'EJAS. DESMARCHEILIER,C: MONGELLI,E: COUSSIO,J: CICCIA,G: J ETHNOPHARMACOL 50 2: 91-96 (1996) (CATEDRA BIOTECNOL MICROBIOL IN FAC FARM BIOQUIM UNIV BUENOS AIRES BUENOS AIERE 1113 ARGENTINA)
K28434	MEDICINAL PLANTS OF TWO MAYAN HEALERS FROM SAN ANDRES, PETEN, GUATEMALA. COMERFORD,SC: ECON BOT 50 3: 327-336 (1996) (DEPT ECOL EVOLUTION ORG BIOL TULANE UNIV NEW ORLEANS LA 70118 USA)
K29710	IMMUNOMODULATORY ACTIVITIES OF PETIVERIA ALLIACEAE L. WILLIAMS,LAD: THE,TL: GARDNER,MT: FLETCHER,CK: NARAVANE,A: GIBBS,N: FLEISHHACKER,R: PHYTOTHER RES 11 3: 251-253 (1997) (DEPT ANATOMY UNIV WEST INDIES MONO JAMAICA)
L03868	TOTAL REACTIVE ANTIOXIDANT POTENTIAL (TRAP) AND TOTAL ANTIOXIDANT REACTIVITY (TAR) OF MEDICINAL PLANTS USED IN SOUTHWEST AMAZONA (BOLIVIA AND PERU). DESMARCHELIER,C: REPETTO,M: COUSSIO,J: LLESUY,S: CICCIA,G: INT J PHARMACOG 35 4: 288-296 (1997) (CATEDRA MICROBIOL INDUST BIOTECHNOL UNIV BUENOS AIRES BUENOS AIRES ARGENTINA)
L04137	AMAZONIAN ETHNOBOTANICAL DICTIONARY. DUKE,JA: BOOK : 181- (1994)(USA)
L04223	RITUAL AND MEDICINAL PLANTS OF THE ESE'EJAS OF THE AMAZONIAN RAINFOREST (MADRE DE DIOS, PERU). DESMARCHELIER,C: GURNI,A: CICCIA,G: GIULIETTI,AM: J ETHNOPHARMACOL 52 1: 45-51 (1996) (CATEDRA BIOTECNOL MICROBIOL IN UNIV BUENOS AIRES BUENOS AIRES ARGENTINA)
L08927	PLANTS USED IN GUATEMALA FOR THE TREATMENT OF PROTOZOAL INFECTIONS II. ACTIVITY OF EXTRACTS AND FRACTIONS OF FIVE GUATEMALAN PLANTS AGAINST TRYPANOSOMA CRUZI. BERGER,I: BARRIENTOS,AC: CACERES,A: HERNANDEZ,M: RASTRELLI,L: PASSREITER,CM: KUBELKA,WG: J ETHNOPHARMACOL 62 2: 107-115 (1998) (INST PHARMACOG UNIV VIENNA VIENNA AUSTRIA)
L11987	PLANTS USED IN GUATEMALA FOR THE TREATMENT OF PROTOZOAL INFECTIONS: I. SCREENING OF ACTIVITY TO BACTERIA, FUNGI AND AMERICAN TRYPANOSOMES OF 13 NATIVE PLANTS. CACERES,A: LOPEZ,B: GONZALEZ,S: BERGER,I: TADA,I: MAKI,J: J ETHNOPHARMACOL 62 3: 195-202 (1998) (FAC CHEM SCI PHARMACY UNIV SAN GUATEMALA GUATEMALA GUATEMALA)
L12432	PLANTS FROM PUERTO RICO WITH ANTI-MYCOBACTERIUM TUBERCULOSIS PROPERTIES. FRAME,AD: RIOSOLIVARES,E: DE JESUS,L: ORTIZ,D: PAGAN,J: MENDEZ,S: P R HEALTH SCI J 17 3: 243-253 (1998) (DIV SCI INTER AMER UNIV PUERTO RICO SAN JUAN PUERTO RICO)
L14626	EVALUATION OF SOME SAMOAN AND PERUVIAN MEDICINAL PLANTS BY PROSTAGLANDIN BIOSYNTHESIS AND RAT EAR OEDEMA ASSAYS. DUNSTAN,CA: NOREEN,Y: SERRANO,G: COX,PA: PERERA,P: BOHLIN,L: J ETHNOPHARMACOL 57 : 35-56 (1997) (DEPT PHARMACOG FAC PHARM UNIV UPPSALA UPPSALA S-751 23 SWEDEN)
L15527	NEUROPHARMACOLOGICAL PROFILE OF ETHNOMEDICINAL PLANTS OF GUATEMALA. CIFUENTES,CM: GOMEZ SERRANILLOS,MP: IGLESIAS,I: VILLAR DEL FRESNO,AM: J ETHNOPHARMACOL 76 3: 223-228 (2001) (DEPT FARMACOLOGIA FAC FARMACIA UNIV CAMPLUTENSE MADRID MADRID SPAIN)

L15570	TRADITIONAL ANTI-MALARIAL MEDICINE IN RORAIMA, BRAZIL. MILLIKEN,W: ECON BOT 51 3: 212-237 (1997) (CENTRE ECONOMIC BOTANY ROYAL BOTANIC GARDENS SURREY ENGLAND)
L15991	SNAKEBITES AND ETHNOBOTANY IN THE NORTHWEST REGION OF COLOMBIA. PART III: NEUTRALIZATION OF THE HAEMORRHAGIC EFFECT OF BOTHROPS ATROX VENOM. OTERO,R: NUNEZ,V: BARONA,J: FONNEGRA,R: JIMENEZ,SL: OSORIO,RG: SALDARRIAGA,M: DIAZ,A: J ETHNOPHARMACOL 73 1/2: 233-241 (2000) (PROGRAMA OFIDISMO FACULTAD MED UNIV ANTIOQUIA MEDELLIN COLOMBIA)
L16047	SCREENING OF MEDICINAL PLANTS USED BY THE GARIFUNA OF EASTERN NICARAGUA FOR BIOACTIVE COMPOUNDS. COE,FG: ANDERSON,GJ: J ETHNOPHARMACOL 53 : 29-50 (1996) (DEPT ECOL EVOLUNT BIOL UNIV CONNECTICUT STORRS CT 06269 USA)
L18407	CYTOKINE PROFILE AND NATURAL KILLER CELL ACTIVITY IN LISTERIA MONOCYTOGENES INFECTED MICE TREATED ORALLY WITH PETIVERIA ALLIACEA EXTRACT. QUEIROZ,MLS: QUADROS,MR: SANTOS,LMB: IMMUNOPHARMACOL IMMUNOTOXICOL 22 3: 501-518 (2000) (DEPT FARMACO HEMOCENTRO FACU CIENCIAS MED UNIV ESTADUAL CAMPINAS BRAZIL)
L18434	PETIVERIA ALLIACEA L.: PLANT DRUG QUALITY CONTROL, HYDROALCOHOLIC EXTRACT STANDARDIZATION AND PHARMACOLOGICAL ASSAY OF LYOPHILIZED EXTRACT. APARECIDA,E: DE CAMPOS,EJV: RUFINO,M: CORTEZ,DG: BERSANI AMADO,CA: SOAREZ,LAL: PETROVICK,PR: DE MELLO,JCP: ACTA FARM BONAERENSE 20 3: 225-232 (2001) (DEPT FARMACIA FARMACOLOGIA UNIV ESTADUAL MARINGA MARINGA BRAZIL)
M01437	GUYANESE ETHNOMEDICAL BOTANY. A FOLK PHARMACOPOEIA. MIHALIK,GJ: ETHNOMEDICINE 5 : 83- (1978) (DEPT ANTHROPOLOGY UNIV PENNSYLVANIA PHYLADELPHIA PA USA)
M18488	SCREENING IN MICE OF SOME MEDICINAL PLANTS USED FOR ANALGESIC PURPOSES IN THE STATE OF SAO PAULO. DI STASI,LC: COSTA,M: MENDACOLLI,LJ: KIRIZAWA,M: GOMES,C: TROLIN,G: J ETHNOPHARMACOL 24 2/3: 205-211 (1988) (DEPT FARMACOL ESCOLA PAULISTA MED SAO PAULO BR-04023 BRAZIL)
M24758	ANTIPROLIFERATIVE EFFECTS OF PETIVERIA ALLIACEA ON SEVERAL TUMOR CELL LINES. ROSSI,V: JOVICEVIC,L: TROIANI,MP: BONANOMI,M: MAZZANTI,G: PHARMACOL RES SUPPL 22 2: 434-. (1990) (ANGELINI RES INST ROME ITALY)
M27151	PLANTS USED IN GUATEMALA FOR THE TREATMENT OF DERMATOPHYTIC INFECTIONS. 1. SCREENING FOR ANTIMYCOTIC ACTIVITY OF 44 PLANT EXTRACTS. CACERES,A: LOPEZ,BR: GIRON,MA: LOGEMANN,H: J ETHNOPHARMACOL 31 3: 263-276 (1991) (FAC CHEM SCI UNIV SAN CARLOS GUATEMALA 01012 GUATEMALA)
M27460	TIPI. A POPULAR ANALGESIC TEA: A DOUBLE-BLIND CROSS-OVER TRIAL IN OSTEOARTHRITIS. FERRAZ,MB: PEREIRA,RB: IWATA,NM: ATRA,E: CLIN EXP RHEUMATOL 9 2: 205-206 (1991) (DIS REUMATOL ESCOLA PAUL MED SAO PAULO CEP-04023 BRAZIL)
M31296	PLANTS USED IN GUATEMALA FOR THE TREATMENT OF DERMATOMUCOSAL INFECTIONS. 1: SCREENING OF 38 PLANT EXTRACTS FOR ANTICANDIDAL ACTIVITY. CACERES,A: JAUREGUI,E: HERRERA,D: LOGEMANN,H: J ETHNOPHARMACOL 33 3: 277-283 (1991) (FAC CHEM SCI PHARM UNIV SAN CARLOS GUATEMALA CITY GUATEMALA)

T00701	MEDICINAL PLANTS OF THE WEST INDIES. AYENSU,ES: UNPUBLISHED MANUSCRIPT : 110 P- (1978) (OFFICE OF BIOLOGICAL CONSERVAT SMITHSONIAN INSTITUTION WASHINGTON DC 20560 USA)
T04621	TERRESTRIAL PLANTS MOLLUSCICIDAL TO LYMNAEID HOSTS OF FASCILIASIS HEPATICA IN PUERTO RICO. MEDINA,FR: WOODBURY,R: J AGR UNIV PUERTO RICO 63 : 366-376 (1979) (PUERTO RICO JUNIOR COLLEGE RIO PIEDRAS PUERTO RICO)
T05032	CARIBBEAN AND LATIN AMERICAN FOLK MEDICINE AND ITS INFLUENCE IN THE UNITED STATES. MORTON,JF: Q J CRUDE DRUG RES 18 2: 57-75 (1980) (MORTON COLLECTANEA UNIV MIAMI CORAL GABLES FL USA)
T07238	STIMULATION OF THE PHAGOCYTIC ACTIVITY OF RETICULOEDOTHELIAL SYSTEM BY PLANT DRUGS. DELAVEAU,P: LALLOUETTE,P: TESSIER,AM: PLANTA MED 40 : 49-54 (1980) (LAB MAT MED FAC SCI PHARM BIOL UNIV RENE DESCARTES PARIS F-75006 FRANCE)
T08016	MEDICINAL PLANTS USED IN A TOTONAC COMMUNITY OF THE SIERRA NORTE DE PUEBLA: TUZAMAPAN DE GALEANA, PUEBLA, MEXICO. MARTINEZ,MA: J ETHNOPHARMACOL 11 2: 203-221 (1984) (DEPT DE BOTANICA INST DE BIOLOGIA UNAM COYOACAN 70-233 MEXICO)
T08133	THE CONCEPT OF PLANTS AS TEACHERS AMONG FOUR MESTIZO SHAMANS OF IQUITOS, NORTHEASTERN PERU. LUNA,LE: J ETHNOPHARMACOL 11 2: 135-156 (1984) (PERHONKATU HELSINKI 00100 FINLAND)
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W00375	THIN-LAYER CHROMATOGRAPHIC ANALYSIS OF COUMARINS AND PRELIMINARY TEST FOR SOME ACTIVE SUBSTANCES IN THE ROOTS OF PETIVERIA ALLIACEA. ROCHA,AB: BONZANI DA SILVA,J: REV FAC FARM ODONTOL ARARAQUARA 3 : 65-72 (1969) (FAC FARM ODONTOL ARARAQUARA BRAZIL)
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W01280	DIGESTIVE DISORDERS AND PLANT MEDICINE IN HIGHLAND GUATEMALA. LOGAN,MH: ANTHROPOS 68 : 537-543 (1973) (NO ADDRESS GIVEN)
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X01111	TESTING OF SELECTED PLANTS FOR ANTIFERTILITY ACTIVITY. VON CZEPANSKI,C: PERSONAL COMMUNICATION 1977 : - (1977) (SCHRERING AG BERLIN GERMANY)
X00001	ANTIVIRAL ACTIVITY OF PETIVERIA ALLIACEA AGAINST THE BOVINE VIRAL DIARRHEA VIRUS. RUFFA MJ, ET AL., CHEMOTHERAPY. 2002 JUL;48(3):144-7. (UNIVERSIDAD DE BUENOS AIRES, BUENO AIRES, ARGENTINA)

Clinical Abstracts

Chemotherapy 2002 Jul;48(3):144-7
Antiviral activity of Petiveria alliacea against the bovine viral diarrhea virus.
Ruffa, M. J., et al.
BACKGROUND: Natural products are a relevant source of antiviral drugs. Five medicinal plants used in Argentina have been assayed to detect inhibition of viral growth. METHODS: Antiviral activity of the infusions and methanolic extracts of Aristolochia macroura, Celtis spinosa, Plantago major, Schinus areira, Petiveria alliacea and four extracts obtained from he leaves and stems of the last plant were evaluated by the plaque assay. RESULTS: P. alliacea, unlike A. macroura, C. spinosa, P. major and S. areira, inhibited bovine viral diarrhea virus (BVDV) replication. Neither P. alliacea nor the assays of the other plants were active against herpes simplex virus type 1, poliovirus type 1, adenovirus serotype 7 and vesicular stomatitis virus type 1. Four extracts of P. alliacea were assayed to detect anti-BVDV activity. Ethyl acetate (EC(50) of 25 microg/ml) and dichloromethane (EC(50) of 43 microg/ml) extracts were active; moreover, promising SI (IC(50)/EC(50)) values were obtained. CONCLUSION: BVDV is highly prevalent in the cattle population, there are no antiviral compounds available; additionally, it is a viral model of the hepatitis C virus. For these reasons and in view of the results obtained, the isolation and characterization of the antiviral components present in the P. alliacea extracts is worth carrying out in the future. Copyright 2002 S. Karger AG, Basel

Phytomedicine 2002 Apr;9(3):245-8
The anti-inflammatory and analgesic effects of a crude extract of Petiveria alliacea L. (Phytolaccaceae).
Lopes-Martins, R. A., et al.
Petiveria alliacea L (Phytolaccaceae) is a perennial bush plant that grows widely in Brazil. The roots and leaves of P.alliacea have been used in folk medicine for their antispasmodic, sedative, diuretic and antihelminthic actions. Wer ecently described the anti-inflammatory properties of P. alliacea administered topically and orally in different animal models. In the present study, we investigated the anti-inflammatory activity of a crude lyophilized extract of P. alliacea roots administered to rats with pleurisy. The oral administration of P. alliacea root extract did not significantly reduce the total number of leukocytes at the doses tested. By contrast, the highest dose of extract tested (43.9 mg/kg body wt.) significantly reduced the number of migrating neutrophils, mononuclear cells and eosinophils; the dose of 31.4 mg/kg body wt. also reduced mononuclear cell migration. The P. alliacea root extract also showed a significant analgesic effect in the experimental model used. The results of this study provide a basis for the use of P. alliacea extracts in popular folk medicine, but further studies are necessary to elucidate the mechanism of its anti-inflammatory and analgesic actions.

J Ethnopharmacol 2002 Mar;79(3):335-9
Cytotoxic effect of Argentine medicinal plant extracts on human hepatocellular carcinoma cell line.
Ruffa, M. J., et al.
Methanolic extracts from Achyrocline satureioides (Dc.) Lam, Aristolochia macroura Gomez, Lithraea molleoides (Vell.) Engl., Schinus molle L., unlike those from Celtis spinosa Spreng, Chenopodium ambrosioides L., Petiveria alliacea L., and Plantago major L. showed cytotoxic activity against a human hepatocellular carcinoma cell line, Hep G2. Schinus molle L. was the most active (IC50=50+/-7 microg/ml). These results call for further studies of these extracts.

Anticancer Res 2001 May-Jun;21(3B):1763-70
Discovery of novel inducers of cellular differentiation using HL-60 promyelocytic cells.
Mata-Greenwood, E., et al.
Non-physiological inducers of terminal differentiation have been used as novel therapies for the prevention and therapy of cancer. We have used cultured HL-60 promyelocytic cells to monitor differentiation, proliferation and cell death events as induced by a large set of extracts derived from plants. Screening of more than 1400 extracts led to the discovery of 34 with potent activity (ED50 <8 mg/ml). Bioassay-guided fractionation led to the isolation of zapotin and 2',5,6-trimethoxyflavone as active principles from Casimiroa edulis, dibenzyltrisulfide and 2-[(phenylmethyl)dithio]ethanol as active principles from Petiveria alliacea, and desmethylrocaglamide from Aglaia ponapensis. Zapotin demonstrated the most favorable biological profile in that induction of differentiation correlated with proliferation arrest, and a lack of cytotoxicity. We conclude

that the HL-60 cell model is a useful system for the discovery of novel pharmacophores with potential to suppress the process of carcinogenesis, and that flavonoids may be especially useful in this capacity.

Phytochemistry 2001 Jul;57(5):743-7
Antifungal polysulphides from Petiveria alliacea L.
Benevides, P. J., et al.
Bioactivity-directed fractionation of the CH(2)Cl(2)/MeOH (2:1, v/v) extract of the roots of Petiveria alliacea, using mutant yeast strains of Saccharomyces cerevisiae and fungi Cladosporium cladosporioides and C. sphaerospermum led to the isolation of dipropyl disulphide (1), dibenzyl sulphide (2), dibenzyl disulphide (3), dibenzyl trisulphide (4), dibenzyl tetrasulphide (5), benzylhydroxymethyl sulphide (6) and di(benzyltrithio) methane (7). Of these, 5-7 are new compounds and this is the first report of the natural occurrence of 2 and 3.

Biochim Biophys Acta 2001 Aug 22;1540(2):166-77
Disassembly of microtubules and inhibition of neurite outgrowth, neuroblastoma cell proliferation, and MAP kinase tyrosine dephosphorylation by dibenzyl trisulphide. Rosner, H., et al.
Dibenzyl trisulphide (DTS), a main lipophilic compound in Petiveria alliacea L. (Phytolaccaceae), was identified as one of the active immunomodulatory compounds in extracts of the plant. To learn more about its biological activities and molecular mechanisms, we conducted one-dimensional NMR interaction studies with bovine serum albumin (BSA) and tested DTS and related compounds in two well-established neuronal cell-and-tissue culture systems. We found that DTS preferentially binds to an aromatic region of BSA which is rich in tyrosyl residues. In SH-SY5Y neuroblastoma cells, DTS attenuates the dephosphorylation of tyrosyl residues of MAP kinase (erk1/erk2). In the same neuroblastoma cell line and in Wistar 38 human lung fibroblasts, DTS causes a reversible disassembly of microtubules, but it did not affect actin dynamics. Probably due to the disruption of the microtubule dynamics, DTS also inhibits neuroblastoma cell proliferation and neurite outgrowth from spinal cord explants. Related dibenzyl compounds with none, one, or two sulphur atoms were found to be significantly less effective. These data confirmed that the natural compound DTS has a diverse spectrum of biological properties, including cytostatic and neurotoxic actions in addition to immunomodulatory activities.

Phytochemistry 2001 Nov;58(6):981-5
Cysteine sulfoxide derivatives in Petiveria alliacea. Kubec, R., et al.
Two diastereomers of S-benzyl-L-cysteine sulfoxide have been isolated from fresh roots of Petiveria alliacea. Their structures and absolute configurations have been determined by NMR, MALDI-HRMS, IR and CD spectroscopy and confirmed by comparison with authentic compounds. Both the R(S) and S(S) diastereomers of the sulfoxide are present in all parts of the plant (root, stem, and leaves) with the latter diastereomer being predominant. Their total content greatly varied in different parts of the plant between 0.07 and 2.97 mg g(-1) fr. wt, being by far the highest in the root. S-Benzylcysteine has also been detected in trace amounts (<10 microg g(-1) fr. wt) in all parts of the plant. This represents the first report of the presence of S-benzylcysteine derivatives in nature.

Med Interne 1990 Oct-Dec;28(4):347-52
Petiveria alleaceae L. (anamu). Study of the hypoglycemic effect.
Lores, R. I., et al.
The combined phytochemical and pharmaceutical study of Petiveria alleaceae L. (anamu) has shown the existence in the leaves and stems of the plant of a possible hypoglycemic active principle. Extracts from leaves and stem powder were found to produce a decrease of blood sugar concentration of more than 60% one hour after oral administration in male Balb/C mice weighing 20 g fasted for 48 hours.

Immunopharmacol Immunotoxicol 2000 Aug;22(3):501-18

Cytokine profile and natural killer cell activity in Listeria monocytogenes infected mice treated orally with Petiveria alliacea extract.

Queiroz, M. L., et al

In this work, we investigated the effects of Petiveria alliacea extract on the production of Th1-type and Th2-type cytokines and on NK cells activity in normal and Listeria monocytogenes infected mice. Our results demonstrated that in normal/non-infected mice P. alliacea administration led to increased levels of Interleukin-2 (IL-2). The infection a one enhanced INF-gamma levels and NK cell activity at 48 and 72 hours of infection. The treatment with five consecutive doses of 1000 mg/kg/day of P. alliacea extract, given previously to infection, led to further increases in IL-2 levels, in relation to normal/non-infected/P. alliacea treated controls, and in INF-gamma levels at 72 h of infection, compared to infected mice. On the other hand, the production of IL-4 and IL-10 were not altered either by the infection or by the treatment with P. alliacea extract. NK cells activity increased at 48 h and 72 h following the inoculation of the bacteria. When mice were treated with P. alliacea previously to infection, NK activity was higher than that observed at 48 h, 72 h and 120 h of infection in the infected animal. Based on these findings we suggest that P. alliacea up-regulates anti-bacterial immune response by enhancing both Th1 function and the activity of NK cells.

Braz J Med Biol Res 1994 Mar;27(3):749-54

Antimitotic action of extracts of Petiveria alliacea on sea urchin egg development.

Malpezzi, E. L., et al.

The hydroethanol extract of the roots of Petiveria alliacea L. (Phytolaccaceae) has been investigated previously as an antitumor agent against mouse Ehrlich ascites. The extract and its methanol, butanol and ether fractions exhibited an antimitotic effect on sea urchin egg development. The aqueous fraction did not produce inhibition of cell cleavage. At the first cleavage the inhibition, at the lowest concentration (10 micrograms/ml), produced by the ether fraction was 42%, whereas the inhibition produced by the total extract and by the other fractions was only 5 to 10% showing that the ether fraction was the most active. Even at higher concentrations the butanol and methanol fractions inhibit the cleavage about 30%. At the first cleavage, the ED50 of the hydroethanol extract and of the ether fraction were 45.02 and 12.40 micrograms/ml, respectively. Furthermore, in the second cleavage, the hydroethanol extract was about twice as potent as the methanol or butanol fractions (ED50 of 22.40, 44.80 and 54.10 micrograms/ml, respectively).

J Ethnopharmacol 1998 Oct;62(3):195-202

Plants used in Guatemala for the treatment of protozoal infections. I. Screening of activity to bacteria, fungi and American trypanosomes of 13 native plants. Caceres, A., et al.

Extracts were prepared from 13 native plants used for the treatment of protozoal infections. Activity against bacteria and fungi was demonstrated by dilution procedures; Trypanosoma cruzi was evaluated in vitro against epimastigote and trypomastigotes and in vivo against trypomastigotes. In active extracts, toxicity was evaluated by Artemia salina nauplii, oral acute toxicity (1-5 g/kg) and oral and intraperitoneal subacute toxicity in mice (500 mg/kg). From the plants screened, six showed activity (< or = 2 mg/ml) against bacteria, three against yeasts, five against Microsporum gypseum and five against T. cruzi in vitro and/or in vivo. In vitro and in vivo activity was demonstrated by Neurolaena lobata and Solanum americanum; in vitro or in vivo activity was shown by Acalypha guatemalensis, Petiveria alliacea and Tridax procumbens. Toxicity studies showed that extracts from S. americanum are toxic to A. salina (aqueous, 160 ppm). None showed acute or oral toxicity to mice; S. americanum showed intraperitoneal subacute toxicity.

J Ethnopharmacol 1998 Sep;62(2):107-15

Plants used in Guatemala for the treatment of protozoal infections: II. Activity of extracts and fractions of five Guatemalan plants against Trypanosoma cruzi.

Berger, I., et al.

The activities of crude plant extracts of five plants popularly used in Guatemala against bacterial and protozoal infections and some of their fractions have been evaluated against the trypomastigote and epimastigote forms of Trypanosoma cruzi in vitro. The most active fraction of Neurolaena lobata has also been screened in vivo. Main in vitro activities against trypomastigotes have been observed for the hexane and ethanol extracts of N. lobata (Asteraceae). Both extracts were also active against epimastigotes, whereas all other extracts tested had no effect on epimastigotes. For the hexane extracts of Petiveria alliacea (Phytolaccaceae) and Tridax procumbens (Asteraceae) a marked inhibition of trypomastigotes has been found. Also the ethanol extracts of Byrsonima crassifolia (Malpighiaceae) leafs and Gliricidia sepium

(Papilionaceae) bark showed some trypanocidal activity. Fraction 2 of the ethanol extract of N. lobata was highly active against T. cruzi as well in vitro as in vivo. The chloroforme fraction of P. alliacea showed a high inhibition of trypomastigotes in vitro. Also three fractions of the active extract of B. crassifolia inhibited T. cruzi trypomastigotes. No fraction of G. sepium bark extract showed a marked trypanocidal activity.

Mutat Res 1992 Jul;280(1):29-34

Evaluation of the genotoxic effects of a folk medicine, Petiveria alliacea (Anamu).

Hoyos, L. S., et al.

Crude extract from a plant known as Petiveria alliacea (Anamu) is used extensively as folk medicine in developing countries like Colombia, South America. Although the plant is known to contain toxic ingredients potential adverse health effects from its use have not been adequately evaluated. We investigated its genotoxic activities by conducting a sister chromatid exchange (SCE) assay using cells in vitro and in vivo. Lymphocytes from humans were treated at 24 h after initiation of culture for 6 h with alcohol extract from the folk medicine. Concentrations of 0, 10, 100, 250, 275, 500, 750, and 1000 micrograms/ml of the extract were used. Significant dose-dependent increase of SCE (3.7-7.4 SCE per cell) were observed (analysis of variances, p less than 0.01). Delay in cell proliferation but not inhibition of mitosis was also observed. In another experiment, mice were exposed once orally to 1x, 200x, 300x and 400x the human daily consumption dose of Anamu. The induction of sister chromatid exchanges in bone marrow cells were investigated. We observed a significant dose dependent increase of SCE compared with the saline control (2.15-4.53; p less than 0.01) and compared with the solvent control (3.04-4.53; p less than 0.01). Our data suggest, therefore, that the folk medicine contains mutagenic and potentially carcinogenic agents although the medicine is not a potent mutagen. Individuals who consume large amounts of this drug may be at risk for development of health problems. Further studies with cells from exposed individuals and from experimental animals should be conducted to provide a better evaluation of health risk from the use of this drug.

Immunopharmacol Immunotoxicol 1999 Feb;21(1):109-24

Petiveria alliacea L. extract protects mice against Listeria monocytogenes infection--effects on bone marrow progenitor cells.

Quadros, M. R., et al.

In this study we have investigated the effects of Petiveria alliacea on the hematopoietic response of mice infected with Listeria monocytogenes. Our results demonstrate a protective effect of the crude extract of P. alliacea since the survival of the treated/infected was higher than that in the infected group. Moreover, the number of granulocyte/macrophage colonies (CFU-GM) and the serum colony stimulating activity levels were increased in the treated/infected mice in relation to the infected group. These results suggest an immunomodulation of Petiveria alliacea extract on hematopoiesis, which may be responsible, at least in part, for the increased resistance of mice to Listeria monocytogenes infection.

J Ethnopharmacol 1991 Sep;34(2-3):173-87

Ethnobotanical survey of the medicinal flora used by the Caribs of Guatemala.

Giron, L. M., et al.

An ethnobotanical survey was conducted among the Carib population of Guatemala in 1988-1989. In general terms, the sample surveyed possessed a relatively good standard of living. Results indicated that health services were utilized by the population, and that domestic medicine, mainly plants (96.9%) was used by 15% of the population. One hundred and nineteen plants used for medicinal purposes were collected, of which 102 (85.7%) could be identified; a list of these together with the information provided for each plant is presented. The most frequently reported plants used as medicine are: Acalypha arvensis, Cassia alata, Cymbopogon citratus, Melampodium divaricatum. Momordica charantia, Neurolaena lobata, Ocimum basilicum, Petiveria alliacea and Solanum nigrescens. Most of these plants are found in the region, but some are brought from the Highlands or outside of the country, such as Malva parviflora, Matricaria chamomilla, Peumus boldus, Pimpinella anisum, Rosmarinus officinalis and Tagetes lucida. This survey demonstrated that the Carib population of Guatemala has survived in a transcultural environment of African and native Amerindian beliefs.

Mem Inst Oswaldo Cruz 1991;86 Suppl 2:241-3

The effectiveness of tipi in the treatment of hip and knee osteoarthritis--a preliminary report.

Ferraz, M. B., et al.

Osteoarthritis (OA) is a common painful inflammatory condition occurring mainly in the later half of life. Hip and knee are the joints mostly affected. Petiveria alliacea (tipi) popularly known as an anti-rheumatic medicine, has been used by OA patients to relief pain. This one-week cross-over double-blind trial has preliminary evaluated the analgesic effect of tipi tea in 14 patients with hip and knee OA. Imperata exaltata (sape) was used as the Placebo tea. The pain assessments that were made at baseline and before the start of the second treatment period by treatment groups were comparable. While taking tipi or placebo tea patients experienced a statistically significant improvement in pain on motion and pain at night. The comparison between the improvements reported while on tipi and placebo tea, however, did not disclose any statistically significant difference. At the conclusion of the study 7 patients preferred tipi tea and 6 preferred placebo tea (NS). Two patients reported insomnia, one during placebo treatment and the other during tipi treatment.

Mem Inst Oswaldo Cruz 1991;86 Suppl 2:153-8

Evaluation of antinociceptive effect of Petiveria alliacea (Guine) in animals.

de Lima, T. C., et al.

Petiveria alliacea (Phytolaccaceae) is a bush widely distributed in South America including Brazil, where it is popularly known as "guine", "pipi", "tipi" or "erva-de-tipi". Brazilian folk medicine attributes to the hot water infusion of its roots or leaves the following pharmacological properties: antipyretic, antispasmodic, abortifacient, antirrheumatic, diuretic, analgesic and sedative. The present study has evaluated the alleged effects of P. alliacea on central nervous system (CNS), particularly, the sedative and analgesic properties of root crude aqueous extract of this plant in mice and rats. This extract showed an antinociceptive effect in acetic acid--acetylcholine--and hypertonic saline--induced abdominal constrictions, but not in hot-plate and tail flick tests. P. alliacea did not produce any CNS depressor effect. Thus its antinociceptive action in animals can be responsible by its popular use as an analgesic.