

Technical Data Report

for

FEDEGOSO

Cassia occidentalis



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Fedegoso

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Family: Leguminosae

Genus: *Cassia*

Species: *occidentalis*

Synonyms: *Senna occidentalis*, *Cassia caroliniana*, *C. ciliata*, *C. falcata*, *C. foetida*, *C. frutescens*, *C. geminiflora*, *C. linearis*, *C. longisiliqua*, *C. obliquifolia*, *C. planisiliqua*, *C. sophora*, *Ditremexa occidentalis*

Common Names: Fedegoso, fedegosa, yerba hedionda, brusca, guanina, martinica, platanillo, manjerioba, peieriaba, retama, achupa poroto, heduibda, folha-de-pajé, kasiah, khiyar shember, pois plante, shih chueh ming, sinamekki, tlalhoaxin, wang chiang nan, senting, kacang kota, menting

Parts Used: Roots, leaves, seeds, bark, flowers

Fedegoso is a small tree that grows 5–8 m high and is found in many tropical areas of South America, including the Amazon. Indigenous to Brazil, it is also found in warmer climates and tropical areas of South, Central, and North America. It is in the same genus as senna (*C. senna*) and is sometimes called “coffee senna.” Its seeds, found in long seed pods, are sometimes roasted and made into a coffee-like beverage. The *Cassia* genus comprises some 600 species of trees, shrubs, vines, and herbs, with numerous species growing in the South American rainforests and tropics. Many species have been used medicinally, and these tropical plants have a rich history in natural medicine. Various *Cassia* plants have been known since the ninth or tenth centuries as purgatives and laxatives, including *Cassia angustifolia* and *Cassia senna*.

Fedegoso has been used as natural medicine in the rainforest and other tropical areas for centuries. Its roots, leaves, flowers, and seeds have been employed in herbal medicine around the world. In Peru, the roots are considered a diuretic, and a decoction is made for fevers. The seeds are brewed into a coffee-like beverage for asthma, and a flower infusion is used for bronchitis in the Peruvian Amazon. In Brazil, the roots of fedegoso are considered a tonic, febrifuge, and diuretic; they are used for fevers, dysmenorrhea, tuberculosis, anemia, liver complaints, and as a reconstituent for general weakness and illness. The leaves are also used in Brazil for gonorrhea, fevers, urinary tract disorders, hydrophy, erysipeloid, and dysmenorrhea. The Miskito Indians of Nicaragua use a fresh plant decoction for general pain, menstrual and uterine pain, and constipation in babies. In Panama, a leaf tea is used for stomach colic, the crushed leaves are used in a poultice as an anti-inflammatory, and the crushed fresh leaves are taken internally to expel intestinal worms and parasites. In many countries around the world, the fresh and/or dried leaves of fedegoso are crushed or brewed into a tea and applied externally for skin disorders, wounds, skin fungi, parasitic skin diseases, abscesses, and as a topical analgesic and anti-inflammatory natural medicine.

Although the seeds of fedegoso are used in herbal medicine in small amounts (and even roasted and brewed as a coffee substitute in some countries), several clinical studies have demonstrated the toxicity of the fresh and/or dried/roasted seeds. Ingestion of large amounts of the seeds by grazing animals has been reported to cause toxicity problems and even death in cows, horses, and goats. Due to the well-known and well-documented toxicity of these seeds, they are best avoided altogether. Toxicity studies on the aerial parts, leaves, and roots of fedegoso have been published by several research groups. These studies reported that various leaf and root extracts given to mice (administered orally and injected at up to 500 mg/kg) did not demonstrate any toxic effect or cause mortality.^{1–3}

The best-known species of *Cassia* in herbal medicine is known as *senna* (*Cassia senna* or *C. acutifolia*). The action of chemicals called *anthraquinones* are the basis of senna's use as a purgative and strong laxative. While fedegoso does contain a small amount of these anthraquinones, it was shown in a rat study not to have the same strong purgative and laxative effects as senna.⁴

Fedegoso has been the subject of recent clinical research for its beneficial effects on the liver and immune system. In the late 1970s, two research groups published three studies citing the beneficial effects of fedegoso in human patients with liver toxicity, hepatitis, and even acute liver failure.⁵⁻⁷ Other researchers followed up on those actions, publishing four different *in vivo* studies (mice and rats) from 1994 to 2001. These studies report that fedegoso leaf extracts have the ability to protect the liver from various introduced chemical toxins, normalize liver enzymes and processes, and repair liver damage.^{1,2,8,9} Some of this research has also demonstrated significant immunostimulant activity by increasing humoral immunity and bone marrow immune cells in mice, and protecting them from chemically-induced immunosuppression.⁹ These researchers and others also reported the antimutagenic actions of fedegoso.^{1,9,10} In this research, fedegoso was able to prevent or reduce the mutation of healthy cells in the presence of laboratory chemicals which were known to mutate them.

In other *in vivo* studies, fedegoso leaf extracts have demonstrated anti-inflammatory, hypotensive, smooth-muscle relaxant, antispasmodic, weak uterine stimulant, vasoconstrictor, hemolysis inhibition, and antioxidant activities in laboratory animals.^{11,12} These documented actions certainly help to explain its uses in traditional medicine systems for menstrual cramps and other internal inflammatory conditions. Fedegoso has also been used for many types of bacterial, fungal, and parasitic infections for many years in the tropical countries where it grows. *In vitro* clinical research on fedegoso leaves over the years has reported active antibacterial (gram + and gram -), antifungal, antiparasitic, insecticidal, and antimalarial properties.¹³⁻¹⁹

Health practitioners today are employing fedegoso in their practices much the same way it has been in traditional medicine for many years. It is an excellent natural remedy for bacterial and fungal infections and now is clinically shown to boost immune function simultaneously. As a liver tonic, science supports its beneficial action and use in various liver conditions including anemia, hepatitis, and liver damage (drug- or alcohol-induced). New research suggests, with its antimutagenic actions, it could possibly help keep damaged liver cells from turning into cancerous ones.

Documented Properties and Actions: Analgesic, antibacterial, antifungal, antihepatotoxic, anti-inflammatory, antimalarial, antimutagenic, antiparasitic, antiseptic, antispasmodic, antiviral, carminative, depurative, diaphoretic, emmenagogue, febrifuge, hepatoprotective, hepatotonic, hypotensive, immunostimulant, insecticidal, laxative, parasiticide, purgative, stomachic, sudorific, vermifuge

Traditional Remedy: The therapeutic dosage is reported to be 4–5 ounces of a standard leaf infusion or root decoction twice daily. One to 4 ounces of a fluid extract or 5–6 ml of a tincture daily can be substituted if desired.

Main Phytochemicals: Achrosine, aloe-emodin, anthraquinones, anthrones, apigenin, aurantiobtusin, campesterol, cassiollin, chryso-obtusin, chrysophanic acid, chrysoarobin, chrysophanol, chrysoeriol, emodin, essential oils, funiculosin, galactopyranosyl, helminthosporin, islandicin, kaempferol, lignoceric acid, linoleic acid, linolenic acid, mannitol, mannopyranosyl, matteucinol, obtusifolin, obtusin, oleic acid, physcion, quercetin, rhamnosides, rhein, rubrofusarin, sitosterols, tannins, xanthorin

Contraindications:

- Fedegoso leaf extracts have demonstrated weak uterine stimulant activity and smooth-muscle relaxant actions in rats.¹² As such, the use of this plant is contraindicated during pregnancy.
- Fedegoso has demonstrated hypotensive activity in dogs¹² and, as such, is contraindicated in people with low blood pressure. Individuals taking medications to lower their blood pressure should check with their doctor first before taking fedegoso (and monitor their blood pressure accordingly, as medications may need to be adjusted).
- Long-term ingestion of small amounts and single high dosages of fedegoso seeds cause toxic reactions including myodegeneration and death. Do not use fedegoso seeds without the supervision of a qualified professional who is familiar with the mechanisms, chemicals and actions of these seeds.

Drug Interactions:

- May potentiate the effects of antihypertensive drugs.
- Fedegoso has demonstrated significant antihepatotoxic, hepatotonic, and hepatic detoxification effects in animal and human studies. As such, the use of this plant might interfere with the metabolism of some drugs in the liver by increasing the clearance of them and/or reducing their half-life (which may reduce the effects of those drugs which are required to be metabolized in the liver).

WORLDWIDE ETHNOBOTANICAL USES

Country	Uses
Africa	Abscess, antifertility, bilious, bronchitis, bruises, cataract, chancre, collyrium, constipation, diuretic, dropsy, dysentery, dysmenorrhea, erysipelas, fever, gonorrhea, guinea worms, headache, hematuria, hemorrhage (pregnancy), hernia, itch, jaundice, kidney, leprosy, malaria, ophthalmia, pain (kidney), postpartum, poultice, purgative, rheumatism, ringworms, scabies, skin disease (parasitic), sore throat, stomach, somachache, sudorific, swelling, syncope, tetanus, venereal disease, vermifuge, wound
Amazonia	Abdominal pain, antifertility, cholagogue, contraceptive, malaria
Brazil	Anemia, diuretic, dysmenorrhea, energy, eryslepia, febrifuge, fever, gonorrhea, hydrophy, illness, liver, malaria, purgative, skin, tonic, tuberculosis, urinary disorders, weakness
Central America	Abortifacient, antifertility, antifungal, antispasmodic, athlete's foot, coffee, constipation, diarrhea, diuretic, dysmenorrhea, emmenagogue, fungal disease (skin), headache, menstrual pain, pain, respiratory infections, ringworm, uterine pain, urinary tract infections, vermifuge
Haiti	Acne, asthma, burn, colic, diaphoretic, dropsy, erysipelas, eye, gonorrhea, headache, malaria, purgative, rheumatism, skin
India	Abscess, bite (scorpion), diabetes, dropsy, febrifuge, itch, liver tonic, purgative, rheumatism, ringworm, scabies, skin diseases, snakebite, swelling, wounds

Country	Uses
Mexico	Anodyne, anthelmintic, astringent, chill, coffee, diuretic, dropsy, dyspepsia, earache, eczema, energy, fever, headache, inflammation (skin), leprosy, nausea, purgative, rash, rheumatism, ringworms, skin, sore, stomachache, stomachic, swelling, tonic, tumor, ulcer, venereal disease, yellow fever
Panama	Anthelmintic, anti-inflammatory, antiseptic, colic, spasm, stomach, vermifuge
Peru	Asthma, bronchitis, diuretic, fever
Trinidad	Abortifacient, cold, heart, heart attack, inflammation, palpitation, puerperium, purgative, womb
Venezuela	Asthma, carminative, cold, diuretic, emmenagogue, fever, malaria, skin
Elsewhere	Abortifacient, antidiuretic, antispasmodic, anthelmintic, bite (scorpion), childbirth, cholagogue, coffee, constipation, contraceptive, dermatosis, diuretic, dropsy, dysmenorrhea, eczema, emmenagogue, febrifuge, gonorrhoea, headache, hemoglobin disorders, hemorrhage, hypertension, lice, liver, malaria, ophthalmia, pain (abdomen), parasiticide, purgative, rheumatism, ringworms, scabies, skin, snakebite, stomachic, tonic, vermifuge, yellow fever

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The information contained herein is intended for education, research, and informational purposes only. This information is not intended to be used to diagnose, prescribe or replace proper medical care. The statements contained herein have not been evaluated by the Food and Drug Administration. The plant described herein is not intended to diagnose, treat, cure, mitigate, or prevent any disease.

Ethnomedical Information on Fedegoso (*Cassia occidentalis*)

Plant Part / Location	Documented Ethnomedical Use	Type Extract / Route	Used For	Ref #
Entire Plant Argentina Root Argentina	Used as an abortifacient by the rural populace. Used as an emmenagogue. Used against diarrhea, respiratory and urinary tract infections. Used as an antispasmodic to alleviate dysmenorrhea.	Not stated Hot H2O Ext / Oral Decoction / Oral Hot H2O Ext / Oral	Human Female Human Female Human Adult Human Female	J01423 T03717 K17523 A05589
Leaf Brazil	Used for fevers. Used for gonorrhea, urinary tract disorders, hydropsy, erysclapias and dysmenorrhea.	Decoction / Oral Hot H2O Ext / Oral	Human Adult Human Adult	K07977 ZZ1013
Root Brazil	Used for malaria. Used as a tonic, febrifuge and diuretic for fevers, tuberculosis, anemia, liver complaints, general weakness and illness. Used for gonorrhea, urinary tract disorders, hydropsy, erysclapias and dysmenorrhea.	Decoction / Oral Decoction / Oral Hot H2O Ext / Oral	Human Adult Human Adult Human Adult	K07256 ZZ1007 ZZ1013
Root Cuba	Used to treat dysmenorrhea.	Hot H2O Ext / Oral	Human Female	W02855
Leaf Ghana	Used for fever and malaria.	Hot H2O Ext / Oral	Human Adult	T16158
Leaf + Root + Seed Guatemala	Used for athlete's foot, ringworm and fungal skin diseases.	Hot H2O Ext / External	Human Adult	M27151
Seed Guinea Not Stated Guinea	Roasted seeds used an antimalarial. Used for hemoglobin disorders.	Seeds / Oral Not Stated / Oral	Human Adult Human Adult	A00708 A04079
Root Guiana	Used as a cholagogue.	Hot H2O Ext / Oral	Human Adult	J10155
Leaf Haiti	Used against asthma and headaches.	Hot H2O Ext / Oral	Human Adult	T04647
Entire Plant India	Used for scorpion stings and snake bite.	Hot H2O Ext / External	Human Adult	T10064
Leaf India	Used on abscesses; Used for ringworm; Used swellings and wounds; Used for rheumatism; Used for diabetes.	Leaves / External Leaves / External Hot H2O Ext / External Hot H2O Ext / Oral Milk / Oral	Human Adult Human Adult Human Adult Human Adult Human Adult	T08282 T10133 T15403 T15403 M27166

Plant Part / Location	Documented Ethnomedical Use	Type Extract / Route	Used For	Ref #
Leaf + Root India Flowers India Fruit India Seed India	Used for skin diseases, scabies, and itching. Used to treat dropsy. Used as a purgative, liver tonic and febrifuge. Used to treat scabies.	Juice / Oral H2O Ext / Oral Hot H2O Ext / Oral Seed Paste / External	Human Adult Human Adult Human Adult Human Adult	M27166 K11282 H01465 K23294
Roasted Seed India	Used as a coffee substitute.	Hot H2O Ext / Oral	Human Adult	T10133
Entire Plant Jamaica Not Stated Jamaica	Used for the prevention of an attack of malaria. Antidiuretic activity.	Wine Ext / Oral Not Stated / Oral	Human Adult Human Adult	W01316
Leaf + Root Kenya	Used for stomach problems and constipation. Used to prevent or treat stomach problems; eaten as a potherb.	Decoction / Oral Plant / Oral	Human Adult Human Adult	M25859 M25859
Leaf Madagascar	Used against malaria.	Hot H2O Ext / Oral	Human Adult	T02110
Flowers Mexico Entire Plant Mexico	Drink prepared to boost energy in old people. Used as an astringent, purgative, anthelmintic, and for fevers, inflammation and rashes.	Hot H2O Ext / Oral Hot H2O Ext / External	Human Adult Human Adult	W01266 J01414
Root New Caledonia Seed New Caledonia	Decoction is taken to facilitate delivery. Used as an emmenagogue.	Hot H2O Ext / Oral Toasted / Oral	Human Female Human Female	A04174 A04174
Entire Plant Nicaragua	Used for menstrual or uterine pain, constipation in infants, and pain	Decoction / Oral	Human Adult	M23149
Entire Plant Nigeria	Used as a lotion for ophthalmia. Used as a diuretic. Used to treat constipation and bleeding during pregnancy. Juice used to induce extrusion of guinea worms.	Plant / Ophthalmic Plant / Oral Leaves / Oral Poultice / External	Human Adult Human Adult Human Adult Human Adult	K08933
Leaf Panama	Used for stomach colic. Used as an antiinflammatory. Used as an anthelmintic.	Hot H2O Ext / Oral Poultice / External Juice / Oral	Human Adult Human Adult Human Adult	T01287
Leaf Papua-New Guinea Shoots Papua-New Guinea	Used to treat abdominal pains. Used as a contraceptive.	Leaf / Chewed Shoots / Oral	Human Adult Human Female	K18142
Root Paraguay Not Stated Paraguay	Used for fertility regulation. Used as an abortifacient by the rural populace.	Hot H2O Ext / Oral Not stated	Human Female Human Female	A03499 J01423

Plant Part / Location	Documented Ethnomedical Use	Type Extract / Route	Used For	Ref #
Root Peru Flowers Peru Seed Peru	Used for fevers and as a diuretic. Used for bronchitis. Brewed into a coffee-like beverage for asthma.	Decoction / Oral Infusion / Oral Hot H2O Ext / Oral	Human Adult Human Adult Human Adult	ZZ1043 ZZ1041 ZZ1041
Bark + Leaf Senegal	Used as an oxytocic.	Hot H2O Ext / Oral	Human Female	A04305
Entire Plant Somalia	Used to treat dull pain, located close to kidneys.	Decoction / Oral	Human Adult	K21228
Seed Somalia	Used to treat itching on head, scabies, and bruises	Tincture / External	Human Adult	K21228
Leaf Tanzania	Used to treat malaria.	Infusion / Oral	Human Adult	K25370
Root Tanzania	Used for hernia, dysmenorrhea and fertility.	Decoction / Oral	Human Adult	T16181
Seed Thailand	Used for high blood pressure.	Decoction / Oral	Human Adult	T16711
Root Trinidad Seed Trinidad	Use as an abortifacients and postpartum depurants. Used as diuretic.	Hot H2O Ext / Oral Hot H2O Ext / Oral	Human Female Human Adult	K03665 W01284
Leaf Vanuatu	Used to facilitate birth. To induce birth.	Juice / Oral	Human Female	K18109
Seed Venezuela	Used an emmenagogue.	Toasted / Oral	Human Female	W02855
Leaf + Seed West Africa	Used for parasitic skin diseases and guinea worms.	Hot H2O Ext / External	Human Adult	M23617
Root West Indies	Used as a diuretic and abortifacient.	Hot H2O Ext / Oral	Human Adult	T00701
Seeds USA	Incriminated as a cause of myodegenerative disease in cattle.	Raw Seedpods / Oral	Cow	T06526

Presence of Compounds in Fedegoso (*Cassia occidentalis*)

Compound	Plant Part	Plant Origin	Quantity	Ref #
1,7-dihydroxy-5-methoxycarbonyl-3-methylxanthone	Not stated	Not stated	Not stated	L04137
4,4',5,5'-tetrahydroxy-2,2'-dimethyl-1,1'-bianthraquinone	Leaf	Not stated	Not stated	L04137
4-o-beta-d-mannopyranosyl-d-mannopyranose	Seed	Not stated	Not stated	L04137
6-o-alpha-d-galactopyranosyl-d-mannopyranose	Seed	Not stated	Not stated	L04137
Achrosine	Not stated	Not stated	Not stated	L04137
Aloe-emodin	Seed	Not stated	Not stated	L04137
Alpha-3-sitosterol	Not stated	Not stated	Not stated	L04137
Anthraquinones	Root	Not stated	19,000 ppm	L04137
Anthrones	Root	Not stated	45,000 ppm	L04137
Apigenin-c-glycoside	Not stated	Not stated	Not stated	L04137
Aurantiobtusin	Root	Not stated	Not stated	L04137
Beta-sitosterol-alpha-glucoside	Seed	Not stated	Not stated	L04137
Bianthraquinone	Not stated	Not stated	Not stated	L04137
Calcium	Seed	Not stated	7,450 ppm	L04137
Campesterol	Seed	Not stated	Not stated	L04137
Cassiollin	Not stated	Not stated	Not stated	L04137
Chrysarobin	Seed	Not stated	2,500 ppm	L04137
Chrysophanic-acid-9-anthrone	Leaf	Not stated	Not stated	L04137
Chrysophanol	Leaf Root	Not stated Not stated	Not stated Not stated	L04137
Copper	Seed	Not stated	15 ppm	L04137

Compound	Plant Part	Plant Origin	Quantity	Ref #
Emodin	Root	Not stated	Not stated	L04137
Essential Oil	Seed	Not stated	175 - 182 ppm	L04137
Fat	Seed	Not stated	39,000 ppm	L04137
Funiculosin	Not stated	Not stated	Not stated	L04137
Gamma-sitosterol	Not stated	Not stated	Not stated	L04137
Glucose	Seed	Not stated	Not stated	L04137
Gum	Seed	Not stated	Not stated	L04137
Helminthosporin	Seed	Not stated	Not stated	L04137
Iron	Seed	Not stated	1,300 ppm	L04137
Islandicin	Seed	Not stated	Not stated	L04137
Jaceidin-7-rhamnoside	Not stated	Not stated	Not stated	L04137
Linoleic-acid	Seed	Not stated	7,850 ppm	L04137
Linolenic-acid	Seed	Not stated	1,575 ppm	L04137
Magnesium	Seed	Not stated	2,880 ppm	L04137
Manganese	Seed	Not stated	42 ppm	L04137
Mannitol	Leaf	Not stated	Not stated	L04137
Matteucinol-7-rhamnoside	Leaf	Not stated	Not stated	L04137
Myricylalcohol	Leaf	Not stated	Not stated	L04137
Nor-rubrofusarin	Leaf	Not stated	Not stated	L04137
O-alpha-d-galactopyranosyl-(1-6)-beta-d-mannopyranosyl	Not stated	Not stated	Not stated	L04137
O-alpha-d-mannopyranosyl-(1-4)-o-beta-d-mannopyranosyl	Not stated	Not stated	Not stated	L04137

Compound	Plant Part	Plant Origin	Quantity	Ref #
Obtusifolin	Leaf	Not stated	Not stated	L04137
Obtusin	Leaf	Not stated	Not stated	L04137
Oleic-acid	Seed	Not stated	7,982 ppm	L04137
Oxymethylantraquinone	Root Seed	Not stated Not stated	3,000 ppm 2,500 ppm	L04137
Physcion	Root	Not stated	Not stated	L04137
Physcion-1-beta-d-glucopyranoside	Flower	Not stated	Not stated	L04137
Physcion-dianthrone	Seed	Not stated	Not stated	L04137
Potassium	Seed	Not stated	9,560 ppm	L04137
Protein	Seed	Not stated	249,000 ppm	L04137
Quercetin	Root	Not stated	Not stated	L04137
Rhamnetin-3-O-(2"-O-beta-D-mannopyranosyl)-beta-D-allopyranoside	Leaf	Not stated	Not stated	L04137
Rhein	Seed	Not stated	Not stated	L04137
Rubrofusarin	Leaf	Not stated	Not stated	L04137
Rubrofusarin-6-beta-gentiobioside	Leaf	Not stated	Not stated	L04137
Rubrofusarin-gentiobioside	Leaf	Not stated	Not stated	L04137
Sodium	Seed	Not stated	45 ppm	L04137
Tannic-acid	Seed	Not stated	Not stated	L04137
Tannin	Seed	Not stated	Not stated	L04137
Xanthorin	Seed	Not stated	Not stated	L04137
Zinc	Seed	Not stated	41 ppm	L04137

Biological Activities for Extracts of Fedegoso (*Cassia occidentalis*)

Plant Part - Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Aerial Parts South Africa	Toxic Effect (general)	Not stated	Gastric Intubation Ewe	14.0 kg	Equivocal	Digestive disturbances as a result of being drenched and not due to the plant being toxic.	W03691
Leaf India	Toxic Effect (general)	ETOH(95%)Ext	IP Mouse	100.0 mg/kg	Inactive	No toxic effect or mortality.	K17388
Leaf India	Toxic Effect (general)	H2O Ext	Oral Mice	100 mg/kg	Inactive	No toxic effect or mortality.	AK1002
Root Congo	Toxic Effect (general)	ETOH Ext CHCL3 Ext H2O Ext	Oral Mice Oral Mice Oral Mice	500 mg/kg 500 mg/kg 500 mg/kg	Inactive	No toxic effect or mortality with any of the extracts as a single dose of 500 mg/kg or given twice weekly for 4 weeks.	AK1003
Aerial Parts UK	Toxic Effect	Rations	Rat	1% 5%	Inactive Inactive	No neurotoxicological or neuro-behavioural effects were seen.	AK1015
Aerial Parts India	Toxic / Genotoxic Effect	H2O Ext	Mice	50 mg/kg 250 mg/kg 500 mg/kg	Inactive	No toxic effect or mortality.	AK1007
Leaf India	Antimutagenic Activity	Not stated	Mice	Not stated	Active	Antimutagenic activity against benzo(a)pyrene and cyclophosphamide.	AK1002
Leaf India	Antimutagenic Activity	H2O Ext	Ames Test	Not stated	Active	Inhibited mutagenicity of aflatoxin B1 and benzo(a)pyrene.	AK1004
Leaf India	Antimutagenic Activity	H2O Ext	Mice	50 mg/kg 250 mg/kg 500 mg/kg	Active	vs. benzo(a)pyrene and cyclophosphamide mutagenesis. Results suggests its antimutagenic activity is by modulating the xenobiotic activation and detoxification mechanisms.	AK1007
Entire Plant India	Cytotoxic Activity	ETOH - H2O (1:1) Ext	Cell Culture	ED50: >20 mcg/ml	Inactive	Ca-9kb.	A03335
Leaf + Stem Jamaica	Uterine Stimulant Effect	ETOH(95%)Ext	Rat	3.3 ml/liter	Weak Activity	Uterus (unspec.cond).	A03360
Leaf + Stem Jamaica	Uterine Stimulant Effect	H2O Ext	Rat	3.3 ml/liter	Weak Activity	Uterus (unspec.cond).	A03360

Plant Part - Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Leaf + Stem Jamaica	Hypotensive Activity	ETOH(95%)Ext H2O Ext	IV Dog IV Dog	0.1 ml/kg 0.1 ml/kg	Active Active		A03360
Leaf India	Hemolysis Inhibitory Activity	Powder	Intragastric Human Adult	10.0 mg/ml	Active	RBC.	T15403
Entire Plant India	Antihepatotoxic Activity	Hot H2O Ext	Oral Human Adult	Not stated	Active		T06410
Entire Plant India	Antihepatotoxic Activity	Not stated	Oral Human Adult	Variable	Active		T06408
Leaf India	Antihepatotoxic Activity	ETOH(95%)Ext	Intragastric Rat	100.0 mg/kg	Active	vs. thioacetamide-induced hepatotoxicity Effectiveness assayed by changes in serum parameters- SGOT, SGPT, SALP, GH.	K17388
Leaf India	Antihepatotoxic Activity	ETOH(95%)Ext	IP Rat	100.0 mg/kg	Active	vs. ccl4-induced hepatotoxicity Effectiveness assayed by changes in serum parameters- SGOT, SGPT, SALP, GH.	K17388
Leaf India	Antihepatotoxic Activity	Pet Ether Ext	Intragastric Rat	100.0 mg/kg	Inactive	vs. thioacetamide-induced hepatotoxicity.	K17388
Not Stated India	Hepatotonic Activity	Not stated	Not stated	Not stated	Active	Modulated hepatic drug metabolizing enzymes.	AK1002
Not Stated India	Hepatotonic Activity	H2O Ext	Mice	50 mg/kg 250 mg/kg 500 mg/kg	Active	Reduced level of cytochrome p450 and elevated levels of glutathione s-transferase activity and glutathione content in the liver.	AK1007
Leaf India	Hepatoprotective Effect	H2O-ETOH Ext	Rat	Not stated	Active	Protected against paracetamol-induced liver damage and ethyl alcohol-induced liver damage.	AK1008
Not Stated India	Immunostimulant Activity	H2O Ext	Mice	100 mg/kg	Active	vs. cyclophosphamide-induced immunosuppression. Improved humoral responses; enhanced plaque forming cell; reversed depressed bone marrow cell counts. Results reported were significant ($p < 0.01$).	AK1002

Plant Part - Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Entire Plant India	Anti-inflammatory Activity	Hot H2O Ext	Oral Human Adult	Variable	Active		T06320
Leaf India	Anti-inflammatory Activity	Powder	Intragastric Rat	1000 mg/kg	Active	vs. carrageenin-induced pedal edema.	T15403
Leaf India	Anti-inflammatory Activity	Powder	Intragastric Rat	1000 mg/kg	Active	vs .cotton pellet granuloma.	T15403
Leaf India	Anti-inflammatory Activity	Powder	Intragastric Rat	1000 mg/kg	Active	vs. cotton pellet granuloma. Inhibited gamma-glutamyl transpeptidase.	T15403
Leaf India	Anti-inflammatory Activity	Powder	Intragastric Rat	1000 mg/kg	Active	vs. cotton pellet granuloma. Inhibited Phospholipase A2.	T15403
Leaf + Stem Jamaica	Smooth Muscle Relaxant Activity	ETOH(95%)Ext	Rabbit	33 ml/liter	Active	Duodenum.	A03360
Leaf + Stem Jamaica	Spasmogenic Activity	ETOH(95%)Ext	Guinea Pig	33 ml/liter	Active	Ileum.	A03360
Leaf + Stem Jamaica	Spasmogenic Activity	H2O Ext	IP Guinea Pig	33 ml/liter	Active	Ileum.	A03360
Leaf + Stem Jamaica	Vasoconstrictor Activity	ETOH(95%)Ext	Rat	0.003 ml/liter	Active	Hind quarter (isolated).	A03360
Leaf England	Hypoglycemic Activity	Not stated	Oral Mouse	6.25 % of diet	Inactive	vs. streptozotocin-induced hyperglycemia.	M23600
Leaf India	Alkaline Phosphatase Inhibition	Powder	Intragastric Rat	1000 mg/kg	Active	Plasma vs.cotton pellet granuloma.	T15403
Leaf India	Antioxidant Activity	Powder	Intragastric Rat	1000 mg/kg	Active	Inhibited lipid peroxide formation in cotton pellet granuloma (measured in granuloma exudate).	T15403
Leaf Nigeria	Laxative Effect	Hot H2O Ext	Intragastric Rat	500.0 mg/kg	Inactive		M28283
Entire Plant India	Anticholesterolemic Activity	Not stated	Gastric Intubation Rat	2.0 ml	Active	Inhibited glutamate-oxaloacetate-transaminase in cholesterol-loaded animals.	T06409

Plant Part - Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Entire Plant India	Anticholesterolemic Activity	Not stated	Gastric Intubation Rat	2.0 ml	Active	Inhibited glutamate-pyruvate-transaminase in cholesterol-loaded animals.	T06409
Not Stated India	Antiviral Activity	Not stated	Oral Human Adult	Not stated	Active	Hepatitis virus - for acute viral hepatitis.	K01835
Leaf India	Antibacterial Activity	Not stated	Agar Plate	10 mg/ml	Active	<i>B. subtilis</i> <i>S. aureus</i>	AK1005
Leaf Nigeria	Antibacterial Activity	MEOH Ext	Agar Plate	2.0 mg/ml	Active	<i>Salmonella sp.</i>	M27767
Root Argentina	Antibacterial Activity	Hot H2O Ext	Agar Plate	Not stated Not stated 62.5 mg/ml 62.5 mg/ml	Active Active Active Inactive	<i>Pseudomonas aeruginosa</i> <i>Salmonella typhi</i> <i>Escherichia coli</i> <i>Staphylococcus aureus</i>	K17523 AK1010 K14683 K14683
Leaf Nigeria	Antibacterial Activity	MEOH Ext	Agar Plate	2.0 mg/ml	Inactive	<i>Corynebacterium diphtheriae</i> <i>Neisseria sp.</i> <i>Pseudomonas aeruginosa</i> <i>Staphylococcus aureus</i> <i>Streptobacillus sp.</i> <i>Streptococcus sp.</i>	M27767
Not Stated Argentina	Antibacterial Activity	Alcoholic Ext	Agar Plate	5.0 mg/ml	Inactive	<i>Bacillus subtilis</i> <i>Escherichia coli</i> <i>Micrococcus luteus</i> <i>Pseudomonas aeruginosa</i> <i>Staphylococcus aureus</i>	K17402
Not Stated Nigeria	Antibacterial Activity	ETOH Ext H2O Ext	Agar Plate	Not stated	Inactive	<i>Salmonella typhi</i>	AK1001
Entire plant Guatemala	Antifungal Activity	Hot H2O Ext	Broth Culture	1.0 ml	Active Active Active Active Inactive	<i>Trichophyton rubrum</i> <i>Epidermophyton floccosum</i> <i>Microsporium gypseum</i> <i>Trichophyton mentagrophytes</i> <i>Microsporium canis</i>	M27151
Leaf Nigeria	Antifungal Activity	MEOH Ext	Agar Plate	2.0 mg/ml	Active	<i>Aspergillus niger</i>	M27767
Leaf Essential Oil India	Antifungal Activity	Essential Oil	Agar Plate	Undiluted	Active	<i>Fusarium oxysporum.</i>	T09031
Not Stated Guatemala	Antifungal Activity	ETOH Ext	Agar plate	MIC: 50 mcg/ml	Active Active Inactive	<i>E. floccosum</i> <i>T. rubrum</i> <i>A. flavus</i>	AK1011

Plant Part - Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Not Stated Argentina	Antifungal Activity	Alcoholic Ext	Agar Plate	5.0 mg/ml	Inactive	<i>Aspergillus niger</i> <i>Mucor sp.</i>	K17402
Root Argentina	Antifungal Activity	Hot H2O Ext	Agar Plate	62.5 mg/ml	Inactive	<i>Aspergillus niger</i>	K14683
Not Stated Argentina	Antiyeast Activity	Alcoholic Ext	Agar Plate	5.0 mg/ml	Inactive	<i>Candida albicans</i>	K17402
Leaf Congo	Antimalarial Activity	ETOH(70%) Ext CH2C12	in vitro	6 mcg/ml	Active	<i>P. falciparum</i> >60% inhibition.	AK1006
Leaf Mali (cult)	Antimalarial Activity	Decoction	In vitro	IC50: 0.58 mg/ml	Weak Activity	vs. <i>Plasmodium falciparum</i> chloroquine-resistant	K18591
Leaf Mali (cult)	Antimalarial Activity	Decoction	Intragastric Mouse	200.0 mg/kg	Weak Activity	<i>Plasmodium berghei</i>	K18591
Root Congo	Antimalarial Activity	ETOH Ext CH2CL2 Ext H2O Ext	Mice Mice Mice	200 mg/kg 200 mg/kg 200 mg/kg	Active Active Weak Activity	<i>Plasmodium berghei</i> (> 60% inhibition).	AK1003
Entire Plant Tanzania	Antimalarial Activity	MECL2 Ext MEOH Ext Pet Ether Ext	In vitro	IC50: > 499 mcg/ml	Inactive	<i>Plasmodium falciparum</i>	M25016
Root Brazil	Antimalarial Activity	Decoction H2O Ext	Intragastric Mouse Intragastric Mouse	Not stated 1.0 gm/kg	Inactive Inactive	<i>Plasmodium berghei</i> <i>Plasmodium berghei</i>	K07256 K07998
Root Brazil	Molluscicidal Activity	ETOH(95%)Ext H2O Ext	Not stated	10000 ppm	Inactive	<i>Biomphalaria glabrata.</i>	W02949
Root Brazil	Molluscicidal Activity	ETOH(95%)Ext Hot H2O Ext	Not stated	10000 ppm	Inactive	<i>Biomphalaria straminea</i>	W00500
Entire Plant Puerto Rico	Molluscicidal Activity	Aqueous slurry (homogenate)	In vitro	LD100: > 1m ppm	Inactive	<i>Lymnaea columella</i>	T04621
Entire Plant Puerto Rico	Molluscicidal Activity	Aqueous slurry (homogenate)	In vitro	LD100: >1m ppm	Inactive	<i>Lymnaea cubensis</i>	T04621
Leaf Paraguay	Insecticide Activity	ETOH(95%)Ext Pet Ether Ext	Not stated	50.0 mcg	Active	<i>Rhodnius neglectus.</i>	K18765

Plant Part - Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Entire Plant Not Stated	Insecticide Activity	Not stated	Not stated	Not stated	Inactive		A04807
Root India	Antiascariasis Activity	ETOH(95%)Ext	Earthworm	Not stated	Inactive		J08904
Root India	Plant Growth Inhibitor Plant Root Growth Inhibitor Plant Germination Inhibition	Aqueous supernatant	External	2.0 %	Active		M26744
Shoots India	Plant Growth Inhibitor Plant Root Growth Inhibitor Plant Germination Inhibition	Aqueous supernatant	External	2.0 %	Active		M26744
Leaf India	Plant Germination Inhibition	CHCL3 Ext	Not stated	Not stated	Weak Activity	vs. <i>Amaranthus spinosus</i> (30.5% inhibition).	T03367

Biological Activities for Fedegoso Seeds/Beans (*Cassia occidentalis*)

Plant Part - Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Beans Origin Not Stated	Toxic Effect	Unroasted Roasted	Goat	Not stated	Active Weak Activity	Roasting partially reduced the toxic effects of the beans. Toxic effect is damage to the liver, vascular system, heart and lungs.	AK1012
Seeds Origin Not Stated	Toxic Effect	MEOH Ext ETOH Ext CHCL3 Ext Ethyl acetate Benzene Ext Sodium Bicarb Sodium citrate	Chicken	Not stated Not stated Not stated Not stated Not stated 25 mM 25 mM	Active Active Active Active Active Weak Activity Weak Activity	Only an aqueous extract of sodium bicarbonate and sodium citrate removed the toxin from the seeds, but they left the toxin bound to particulate matter in the extract. Toxicity symptoms were weight loss, weakness, diarrhea, hypothermia, ataxia, recumbency, liver congestion, myodegeneration and death.	AK1013
Seed (external tegment) Brazil	Toxic Effect	Not stated	Chicken	Rations	Active	Skeletal myodegeneration and weight loss.	AK1009
Origin Not Stated	Toxic Effect	Not stated	Goat	Not stated	Active	Signs of cassia poisoning were diarrhea, inappetence, dyspnea, staggering, ataxia and recumbency, hemorrhages and congestion in the heart, lungs, abomasum and spleen, catarrhal enteritis, hepatic fatty change and necrosis, splenic hemosiderosis, pulmonary emphysema, degeneration of the renal tubule.	AK1014
Seed France	Toxic Effect (general)	Not stated	Oral Dog	Not stated	Active	Contains a toxic albumin that can be partially or entirely detoxified through the action of formalin. This albumin also behaves as an allergen and it is possible to immunize dogs against it by repeated subcutaneous injections.	W03638
Seed USA-LA	Toxic Effect (general)	Aqueous bicarbonate	Gastric Intubation Chicken	Variable	Active		T06526

Plant Part - Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Seed India	Toxic Effect (general)	H2O Ext	Rat	Variable	Active	Feeding caused weight loss unless supplemented with L-methionine and l-tryptophan.	T06797
Seed USA-TX	Toxic Effect (general)	Seeds in Ration	Cow	Not stated	Active	Toxicity symptoms and death described for cattle grazing on this plant(especially the seeds).	T01338
Seed Brazil	Toxic Effect	Rations	Rabbit	1% 2% 3% 4%	Active	Ration with 4% seeds gained less weight and died in the third week. Heart and liver affected with muscle atrophy.	AK1017
Seed USA	Toxic Effect	Seeds in Ration	Gastric Intubation Horse	Variable	Active	Administration of ground ripe beans to three shetland ponies, at 0.10, 0.20 and 0.33% of the animals body weight, dose-related lethality was observed. The levels of blood serum enzymes were increased. Lesions of the muscle fibers were detected upon microscopic examination.	T07081
Seed USA	Toxic Effect	Seeds in Ration	Calf	Not stated	Active	Increased death rate occurred when calves were also treated with vitamin-E and selenium, but not with selenium alone.	W04414
Seed Not Stated	Cardiotoxic Activity	Not Stated	Rabbit	Not stated	Active	Mitochondria were unable to maintain ionic gradients and became swollen, resulting in failure of respiration, disruption of mitochondrial structure and myocardial degeneration.	W03612
Seed USA	Neurotoxic Activity	Seeds in Ration	Pig	Variable	Active		T14239
Seed Brazil	Neurotoxic Effect	Rations	Chick	Not stated	Active	Axonal damage and degeneration of the myelin sheath observed.	AK1011
Seed USA-LA	Respiration (cellular) Inhibition	Aqueous bicarbonate	Chicken	Variable	Active	Mitochondria (liver).	T06526
Seed Not Stated	Antitoxic Activity	MEOH Ext	IP Mouse	125.0 mg/kg	Weak Activity	Vs. strychnine poisoning.	T10453

Plant Part - Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Seed Not Stated	Barbiturate Potentiation	MEOH Ext	IP Mouse	500.0 mg/kg	Active	Results significant at p < 0.01 level.	T10453
Seed Not Stated	Barbiturate Inhibition	MEOH Ext	IP Mouse	125.0 mg/kg	Inactive		T10453
Seed Brazil	Myodegenerative Effect	Not stated	Rat	Not stated	Active	Impaired cytochrome oxidase mitochondrial activity in myofibers characteristic of mitochondrial myopathy.	AK1016
Seed Brazil	Myodegenerative Effect	Rations	Rat	1% 2% 3%	Active Active Active	Induced mitochondrial myopathy.	AK1018
Seed Brazil	Myodegenerative Effect	Not stated	In vivo	Not stated	Active	Induced skeletal muscle atrophy and a decrease in weight gain.	AK1019
Seed Brazil	Myodegenerative Effect	Rations	Hen	Not stated	Active	Mitochondrial myopathy observed.	AK1011
Seed Brazil	Myodegenerative Effect	Rations	Chicken	4%	Active	Mitochondrial myopathy induced with muscle-fiber atrophy, lipid storage and cytochrome oxidase-negative fibers.	AK1012
Tegment Brazil	Myodegenerative Effect	Rations	Birds	0.2%	Active	Muscles had features similar to human mitochondrial myopathy.	AK1013
Beans Brazil	Myodegenerative Effect	Rations	Cow	21.5%	Active	Muscle weakness, incoordination and recumbency seen.	AK1014
Seed Not Stated	Protein Synthesis Inhibition	H2O Ext	Not stated	ID50=0.1 mg/ml	Inactive	Reticulocyte lysate (rabbit).	T01769
Seed Cuba	Bronchodilator Activity	Hot H2O Ext	IV Guinea Pig	1.5 ml	Inactive		M29843
Seed India	Antifungal Activity	ETOH-H2O (1:1) Ext	Agar Plate	10%	Inactive	<i>Absidia ramosa</i>	T08445
Seed India	Antifungal Activity	ETOH-H2O (1:1) Ext	Agar Plate	10%	Inactive	<i>Aspergillus niger</i>	T08445
Seed Japan	Antifungal Activity	Hot H2O Ext	Agar Plate	Variable	Active	<i>Trichophyton granulosum</i>	W04331
Seed Japan	Antifungal Activity	Hot H2O Ext	Agar Plate	Variable	Active	<i>Trichophyton gypseum</i>	W04331
Seed Japan	Antifungal Activity	Hot H2O Ext	Agar Plate	Variable	Active	<i>Trichophyton purpureu</i>	W04331

Plant Part - Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Seed India	Antibacterial Activity	Pet Ether Ext Cyclohexane Essential Oil ETOH(95%)Ext	Agar Plate	Not stated	Active	Several gram + and - organisms.	W04415
Seed Nigeria	Antibacterial Activity	MEOH Ext	Agar Plate	2.0 mg/ml	Inactive	<i>Corynebacterium diphtheriae</i>	M27767
Seed Nigeria	Antibacterial Activity	MEOH Ext	Agar Plate	2.0 mg/ml	Inactive	<i>Neisseria sp.</i>	M27767
Seed Nigeria	Antibacterial Activity	MEOH Ext	Agar Plate	2.0 mg/ml	Inactive	<i>Pseudomonas aeruginosa</i>	M27767
Seed Nigeria	Antibacterial Activity	MEOH Ext	Agar Plate	2.0 mg/ml	Inactive	<i>Salmonella sp.</i>	M27767
Seed Nigeria	Antibacterial Activity	MEOH Ext	Agar Plate	2.0 mg/ml	Inactive	<i>Staphylococcus aureus</i>	M27767
Seed Nigeria	Antibacterial Activity	MEOH Ext	Agar Plate	2.0 mg/ml	Inactive	<i>Streptobacillus sp.</i>	M27767
Seed Nigeria	Antibacterial Activity	MEOH Ext	Agar Plate	2.0 mg/ml	Inactive	<i>Streptococcus sp.</i>	M27767
Seed Brazil	Antibacterial Activity	ETOH(95%)Ext	Agar Plate	Variable	Inactive	<i>Bacillus subtilis</i> <i>Escherichia coli</i> <i>Salmonella typhosa</i> <i>Sarcina lutea</i> <i>Staphylococcus aureus</i>	W04330
Seed Brazil	Antibacterial Activity	ETOH(95%)Ext	Agar Plate	Variable	Inactive		W04330
Seed India	Plant Germination Inhibition	CHCL3 Ext	Not stated	Not stated	Active	vs. <i>amaranthus spinosus</i> (66% inhibition).	T03367
Seed India	Plant Germination Inhibition	Aqueous supernatant	External	2.0 %	Active		M26744
Seed India	Plant Growth Inhibitor	Aqueous supernatant	External	2.0 %	Active		M26744
Seed India	Plant Root Growth Inhibition	Aqueous supernatant	External	2.0 %	Active		M26744
Fruit Sudan	Molluscicidal Activity	ETOH(80%)Ext	In vitro	200.0 mg/liter	Inactive	<i>Biomphalaria pfeifferi</i>	M26126
Fruit Sudan	Molluscicidal Activity	ETOH(80%)Ext	In vitro	200.0 mg/liter	Inactive	<i>Bulinus truncatus</i>	M26126
Not Stated West Africa	Insect Repellent Activity	Not stated	Not stated	Not stated	Inactive	Repelled mosquitos by 29.4%. less effective than control.	AK1010

Plant Part - Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Not Stated UK	Insecticidal Activity	Not stated	In vitro	0.5% 1% 5%	Active Active Active	<i>Rhyzopertha dominica</i> <i>Callosobruchus maculatus</i> <i>Sitophilus zeamais</i> <i>Prostephanus truncatus</i>	AK1015
Not Stated Japan	Antitumor Activity	Emodin Conc	Topical Mouse		Active	Anti-tumor promoting effect on skin tumors induced by chemicals.	AK1015

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K17388	ANTIHEPTATOTOXIC ACTIITY OF CASSIA OCCIDENTALIS. SARAF,S: DIXIT,VK: TRIPATHI,SC: PATNAIK,GK: INT J PHARMACOG 32 2: 178-183 (1994) (DEPT PHARM SCI DR HARISINGH GOUR VISHAWVIDYALAYA SAGAR MP 470 003 INDIA)
K17402	ANTIBACTERIAL AND ANTIFUNGAL ACTIVITIES OF SOME ARGENTINEAN PLANTS. PENNA,CA: RADICE,M: GUTKIND,GO: VAN BAREN,C: BROUSSALIS,A: MUSCHIETTI,L: MARTINO,V: FERRARO,G: FITOTERAPIA 65 2: 172-174 (1994)(CAT MICROBIOL FAC FARM BIOQUIM UNIV BUENOS AIRES BUENOS AIRES ARGENTINA)

K18591	EVALUATION IN VITRO AND IN VIVO OF A TRADITIONAL ANTIMALARIAL, "MALARIAL 5". GASQUET,M: DELMAS,F: TIMON-DAVID,P: KEITA,A: GUINDO,M: KOITA,N: DIALLO,D: DOUMBO,O: FITOTERAPIA 64 5: 423-. (1993)(LAB PARASITOL FAC PHARM MARSEILLE 13385 FRANCE)
K11282	A SURVEY OF PLANT CRUDE DRUGS OF ANANTAPUR DISTRICT, ANDHRA PRADESH, INDIA. REDDY,MB: REDDY,KR: REDDY,MN: INT J CRUDE DRUG RES 27 3: 145-155 (1989) (DEPT BOTANY SRI VENKATESWARA UNIV TIRUPATI 517 502 INDIA)
K17523	INHIBITION OF PSEUDOMONAS AERGUINOSA BY ARGENTINEAN MEDICINAL PLANTS. PEREZ,C: ANESINI,C: FITOTERAPIA 65 2: 169-172 (1994) (CAT FARMACOL FAC ODONTOL UNIV BUENOS AIRES BUENOS AIRES ARGENTINA)
K18109	MATERNITY AND MEDICINAL PLANTS IN VANUATU I. THE CYCLE OF REPRODUCTION. BOURDY,G: WALTER,A: J ETHNOPHARMACOL 37 3: 179-196 (1992)(LAB PHARMACOL NOUMEA NEW CALEDONIA)
K18142	MEDICINAL PLANTS OF THE GAZELLE PENISULA, NEW BRITAIN ISLAND, PAPUA NEW GUINEA. PART I. HOLDSWORTH,D: INT J PHARMACOG 30 3: 185-190 (1992)(CHEM DEPT UNIV BRUNEI GADONG 3186 BRUNEI)
K18765	A SCREENING METHOD FOR NATURAL PRODUCTS ON TRIATOMINE BUGS. SCHMEDA-HIRSCHMANN,G: ROJAS DE ARIAS,A: PHYTOTHER RES 6 2: 68-73 (1992)(INSTIT INVEST CIEN SALUD ASUNCION PARAGUAY)
K21228	INVENTORY OF PLANTS USED IN TRADITIONAL MEDICINE IN SOMALIA. I. PLANTS OF THE FAMILIES ACANTHACEAE-CHENOPODIACEAE. SAMUELSSON,G: FARAH,MH: CLAESON,P: HAGOS,M: THULIN,M: HEDBERG,O: WARFA,AM: HASSAN,AO: ELMI,AH: ABDURAHMAN,AD: ELMI,AS: ABDI,YA: ALIN,MH: J ETHNOPHARMACOL 35 1: 25-63 (1991) (DEPT PHARMACOG FAC PHARM UNIV UPPSALA UPPSALA S-751 23 SWEDEN)
K23294	TRADITIONAL PLANT REMEDIES AMONG THE KONDH OF DISTRICT DHENKANAL (ORISSA). GIRACH,RD: AMINUDDIN: SIDDIQUI,PA: KHAN,SA:INT J PHARMACOG 32 3: 274-283 (1994)(SURVEY MED PLANTS UNIT REG RES INST UNANI MEDBHADRAK 756 INDIA)
K25370	TRADITIONAL HEALERS IN TANZANIA: THE TREATMENT OF MALARIA WITH PLANT REMEDIES. GESSLER,MC: MYSUYA,DE: NKUNYA,MHH: MWASUMBI,LB: SCHAR,A: HEINRICH,M: TANENR,M: J ETHNOPHARMACOL 48 3: 131-144 (1995)(DEPT PUBL HEALTH EPIDEMIOLOG SWISS TROP INST BASEL SWITZERLAND)
L02293	PLANTS OF COMMON USED IN PARAGUAYAN FOLK MEDICINE FOR REGULATING FERTILITY. ARENAS,P: MORENO AZORERO,R: ECON BOT 31 : 298-301 (1977) (INST CIECIAS BASICAS UNIV NAC ASUNCION CIUDAD UNIV SAN LORENZO PARAGUAY)
M23149	HERBAL MEDICINE AMONG THE MISKITO OF EASTERN NICARAGUA. DENNIS,PA: ECON BOT 42 1: 16-28 (1988) (DEPT ANTHROPOL TEXAS TECH UNIV LUBBOCK TX 79409 USA)
M23600	EVALUATION OF TRADITIONAL PLANT TREATMENTS FOR DIABETES: STUDIES IN STREPTOZOTOCIN DIABETIC MICE. SWANSTON-FLATT,SK: DAY,C: BAILEY,CJ: FLATT,PR: ACTA DIABETOL LAT 26 1: 51-55 (1989)(DEPT BIOL BIOMED SCI UNIV ULSTER COLERAINE ULSTER NORTHERN IRELAND)
M23617	NEW MACROFILARICIDAL LEADS FROM PLANTS? COMLEY,JCW: TROP MED PARASITOL 41 1: 1-9 (1990) (DEPT MOLE SCI WELLCOME RES LAB BECKENHAM KENT ENGLAND)

M25016	ANTIMALARIAL ACTIVITY OF TANZANIAN MEDICINAL PLANTS. WEENEN,H: NKUNYA,MHH: BRAY,DH: MWASUMBI,LB: KINABO,LS: KILIMALI,VAEB: PLANTA MED 56 4: 368-370 (1990)(DEPT CHEM UNIV DAR ES SALAAM DAR ES SALAAM TANZANIA)
M25859	HERBAL REMEDIES OF THE LUO OF SIAYA DISTRICT, KENYA: ESTABLISHING QUANTITATIVE CRITERIA FOR CONSENSUS. JOHNS,T: KOKWARO,JO: KIMANANI,EK: ECON BOT 44 3: 369-381 (1990)(SCH DIETETICS HUMAN NUT MAC DONALD COLL MC GILL UNIV STE ANNE DE BELLEVUE QUEBEC H9X 1C0 CANADA)
M26126	SCREENING OF SUDANESE PLANTS FOR MOLLUSCICIDAL ACTIVITY AND IDENTIFICATION OF LEAVES OF TACCA LEONTOPELALOIDES (L.) O KTZE (TACCACEAE) AS A POTENTIAL NEW EXPLOITABLE RESOURCE. ABDEL-AZIZ,A: BRAIN,K: BASHIR,AK: PHYTOTHER RES 4 2: 62-65 (1990) (WELSH SCH PHARM UNIV WALES COLL CARDIFF CARDIFF CF1 3XF WALES)
M26744	ALLELOPATHIC EFFECT OF SOME WEEDS OF VEGETABLE CROPS ON THE GERMINATION AND EARLY SEEDLING GROWTH OF BAJRA. RAO,JVS: RAMA MOHAN RAO,K: MURTHY,SS: TROP ECOL 20 1: 5-8 (1979)(DEPT BOTANY SRI VENKATESWARA UNIV TIRUPATI AP 57102 INDIA)
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)
M27166	A SURVEY OF PLANT CRUDE DRUGS OF RAYALASEEMA, ANDHRA PRADESH, INDIA. NAGARAJU,N: RAO,KN: J ETHNOPHARMACOL 29 2: 137-158 (1990)(DEPT BOT MED PLANTS RES LAB SRI VENKATESWARA UNIV TIRUPATI AP 517 502 INDIA)
M27767	PLANTS IN KANO ETHOMEDICINE; SCREENING FOR ANTIMICROBIAL ACTIVITY AND ALKALOIDS. HUSSAIN,HSN: DEENI,YY: INT J PHARMACOG 29 1: 51-56 (1991)(DEPT BIOL SCI BAYERO UNIV KANO NIGERIA)
M28283	CHEMICAL AND BIOLOGICAL ANALYSES OF NIGERIAN CASSIA SPECIES FOR LAXATIVE ACTIVITY. ELUJOBA,AA: AJULO,OO: IWEIBO,GO: J PHARM BIOMED ANAL 7 12: 1453-1457 (1989)(DEPT PHARM OBAFEMI AWOLOWO UNIV ILE-IFE NIGERIA)
M29843	PHARMACOLOGICAL SCREENING OF PLANT DECOCTIONS COMMONLY USED IN CUBAN FOLK MEDICINE. CARBAJAL,D: CASACO,A: ARRUZAZABALA,L: GONZALEZ,R: FUENTES,V: J ETHNOPHARMACOL 33 1/2: 21-24 (1991)(DEPT PHARM NATL CENTER SCI RES HAVANA CITY CUBA)
T00701	MEDICINAL PLANTS OF THE WEST INDIES. AYENSU,ES UNPUBLISHED MANUSCRIPT : 110 P- (1978) (OFFICE OF BIOLOGICAL CONSERVAT SMITHSONIAN INSTITUTION WASHINGTON DC 20560 USA)
T01287	ETHNOPHARMACOGNOSITC OBSERVATIONS ON PANAMANIAN MEDICINAL PLANTS. PART I. GUPTA,MP: ARIAS,TD: CORREA,M: LAMBA,SS Q J CRUDE DRUG RES 17 3/4: 115-130 (1979) (ORG AMER ST PHARMACOG RES UNIT FAC CIENC NAT Y FARM UNIV PANAMA PANAMA CITY 10767 PANAMA)
T01338	SENNA BEAN TOXICITY IN CATTLE. SCHMITZ,DG: DENTON,JH SOUTHWEST VET 30 : 165-170 (1977)(NO ADDRESS GIVEN)

T01769	SEED EXTRACTS INHIBITING PROTEIN SYNTHESIS IN VITRO. GASPERI-CAMPANI,A: BARBIERI,L: MORELLI,P: STIRPE,F BIOCHEM J 186 : 439-441 (1980)(INST PATOL GENERALE UNIV BOLOGNA BOLOGNA I-40126 ITALY)
T02110	THERAPEUTIC USE OF NATURAL ANTHRAQUINONE FOR OTHER THAN LAXATIVE ACTIONS. ANTON,R: HAAG-BERRURIER,M PHARMACOLOGY SUPPL 20 : 104-112 (1980) (LAB PHARMACOGNOSIE FAC PHARM UNIV LOUIS PASTEUR ILLKIRCH F-67400 FRANCE)
T03367	A NEW REPORT OF POSSIBLE SOURCE OF NATURAL HERBICIDE RIZVI,SJH: MUKERJI,D: MATHUR,SN INDIAN J EXP BIOL 18 : 777-781 (1980) (BOTANY DEPT UNIV GORAKHPUR GORAKHPUR UP 273 001 INDIA)
T03717	FERTILITY-REGULATING PLANTS USED IN POPULAR MEDICINE IN NORTHEASTERN ARGENTINA. MARTINEZ-CROVETTO,R PARODIANA 1 1: 97-117 (1981) (DEPARTAMENTO DE BOTANICA FAC AGRONOMIA Y VETERINARIA UNIV NACIONAL DEL NORDESTE CORRIENTES ARGENTINA)
T04621	TERRESTRIAL PLANTS MOLLUSCICIDAL TO LYMNÆID 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)
T04647	PLANTS OF HAITI USED AS ANTIFERTILITY AGENTS. WENINGER,B: HAAG-BERRURIER,M: ANTON,R J ETHNOPHARMACOL 6 1: 67-84 (1982)(LAB CHIM FAC MED PORT-AU-PRINCE HAITI)
T06320	EVALUATION OF THE ROLE OF RUMALAYA AND GERIFORTE IN CHRONIC ARTHRITIS-A PRELIMINARY STUDY. DABRAL,PK: SHARMA,RK: PROBE 22 2: 120-127 (1983) (DEPT ORTHOPEDICS M.L.B. MEDICAL COLLEGE JHANSI UP INDIA)
T06408	A PRELIMINARY REPORT ON THE ROLE OF LIV-52-AN INDIGENOUS DRUG, IN SERUM B HEPATITIS(AUSTRALIA ANTIGEN POSITIVE) CASES. PATNEY,NL: KUMAR,A: PROBE 17 2: 132-142 (1978)(POSTGRADUATE DEPT MEDICINE S.N.MEDICAL COLLEGE AGRA UP INDIA)
T06409	CHANGES IN SERUM TRANSAMINASES DUE TO HEPATOTOXICITY AND THE ROLE OF AN INDIGENOUS HEPATOTONIC, LIV-52. SUBBARAO,VV: GUPTA,ML: PROBE 17 2: 175-178 (1978)(FAC MEDICINE UNIVERSITY OF TRIPOLI TRIPOLI LIBYA)
T06410	CLINICAL MANAGEMENT OF SEVERE ACUTE HEPATIC FAILURE WITH SPECIAL REFERENCE TO LIV-52 IN THERAPY. SETHI,JP: SHARMA,M: PROBE 17 2: 155-158 (1978)(DEPT MEDICINE S.M.S.MEDICAL COLLEGE & HOSP JAIPUR RAJASTHAN INDIA)
T06512	INVESTIGATION OF CERTAIN PLANTS USED IN SUDANESE FOLK MEDICINE. EL-KHEIR,YM: SALIH,MH: FITOTERAPIA 51 : 143-147 (1980)(FACULTY OF PHARMACY UNIVERSITY OF KHARTOUM KHARTOUM SUDAN)
T06526	EFFECTS OF A CASSIA OCCIDENTALIS EXTRACT IN THE DOMESTIC CHICKEN (GALLUS DOMESTICUS). GRAZIANO,MJ: FLORY,W: SEGER,CL: HEBERT,CD: AMER J VET RES 44 7: 1238-1244 (1983)(DEPT VETERINARY PHYSIOLOGY,PHARMACOLOGY, & TOXICOLOGY,SCH VE T MED, LOUISIANA STATE UNIV BATON ROUGE LA 70803 USA)
T06797	CHEMICAL EXAMINATION AND BIOLOGICAL EVALUATION OF PROTEINS ISOLATED FROM SOME WILD LEGUMES. NIRANJAN,GS: KATIYAR,SK: J INDIAN CHEM SOC 58 : 70-72 (1981)(DEPT CHEM D.V.COLLEGE ORAI UP INDIA)

T07081	TOXICITY OF CASSIA OCCIDENTALIS IN THE HORSE. MARTIN,BW: TERRY,MK: BRIDGES,CH: BAILEY JR,EM: VET HUM TOXICOL 23 6: 416-417 (1981)(DEPT PHYSIOL PHARM TEXAS A & M UNIV COLLEGE STATION TX 77843 USA)
T08282	ONE HUNDRED USEFUL RAW DRUGS OF THE KANI TRIBES OF TRIVANDRUM FOREST DIVISION, KERALA, INDIA. JOHN,D: INT J CRUDE DRUG RES 22 1: 17-39 (1984)(BIOLOGICAL SCIENCES UNIV OF CALABAR CALABAR NIGERIA)
T08445	ANTIFUNGAL ACTIVITY OF SOME SEED EXTRACTS WITH SPECIAL REFERENCE TO THAT OF PIMPINELLA DIVERSIFOLIA DC. PANDEY,DK: TRIPATHI,NN: TRIPATHI,RD: DIXIT,SN: INT J CRUDE DRUG RES 21 4: 177-182 (1983)(NATURAL PESTICIDES LAB GORAKHPUR UNIV GORAKHPUR UP 273001 INDIA)
T09031	VOLATILE FUNGITOXIC ACTIVITY OF SOME HIGHER PLANTS WITH SPECIAL REFERENCE TO THAT OF CALLISTEMON LANCEOLATUS DC. PANDEY,DK: CHANDRA,H: TRIPATHI,NN: PHYTOPATHOL Z 105 : 175-182 (1982)(BOTANY DEPT NATURAL PESTICIDE LAB GORAKHPUR UNIV GORAKHPUR UP 273001 INDIA)
T10064	MEDICINAL PLANTS IN THE FOLK-LORE OF NORTH-EAST HARYANA. JAIN,SP: VERMA,DM: NATL ACAD SCI LETT(INDIA) 4 7: 269-271 (1981) (BOTANICAL SURVEY INDIA NORTHERN CIRCLE DEHRADUN UP INDIA)
T10133	LESS KNOWN USES OF WEEDS AS MEDICINAL PLANTS. SAHU,TR: ANCIENT SCI LIFE 3 4: 245-249 (1984) (DEPT BOTANY DR HARISINGH GOUR VISHWAVIDYALAYA SAGAR MP 470003 INDIA)
T10275	IN VITRO EFFECT OF AN AYURVEDIC LIVER REMEDY ON HEPATIC ENZYMES IN CARBON TETRACHLORIDE TREATED RATS. BARDHAN,P: SHARMA,SK: GARG,NK: INDIAN J MED RES 82 4: 359-364 (1985)(CENTRAL DRUG RESEARCH INST LUCKNOW UP 226 001 INDIA)
T10453	A SURVEY OF THE RESPONSE OF MEDICINAL PLANTS ON DRUG METABOLISM. SHIN,KH: WOO,WS: KOREAN J PHARMACOG 11 : 109-122 (1980)(NAT PROD RES INST SEOUL NATL UNIV SEOUL 110 KOREA)
T14239	CASSIA OCCIDENTALIS TOXICOSIS IN GROWING PIGS. COLVIN,BM: HARRISON,LR: SANGSTER,LT: GOSSER,HS: J AMER VET MED ASS 189 4: 423-426 (1986)(COLL VET MED UNIV GEORGIA TIFTON GA 31793 USA)
T15403	BIOCHEMICAL MODES OF ACTION OF CASSIA OCCIDENTALIS AND CARDIOSPERMUM HALICACABUM IN INFLAMMATION. SADIQUE,J: CHANDRA,T: THENMOZHI,V: ELANGO,V: J ETHNOPHARMACOL 19 2: 201-212 (1987) (DEPT SIDDHA MED FAC SCI TAMIL UNIV THANJAVUR TAMIL NADU 613 001 INDIA)
T16158	STUDIES ON ANTIMALARIAL ACTION OF CRYPTOLEPIS SANGUINOLENTA EXTRACT. BOYE,GL: PROC INT SYMP ON EAST-WEST MED, SEOUL, KOREA, OCTOBER 10-11 1989 : 243-251 (1990)(CENT SCI RES PLANT MED MAMPONG-AKWAPIM GHANA)
T16181	PLANTS USED IN TRADITIONAL MEDICINE IN EASTERN TANZANIA. I. PTERIDOPHYTES AND ANGIOSPERMS (ACANTHACEAE TO CANELLACEAE). CHHABRA,SC: MAHUNNAH,RLA: MSHIU,EN: J ETHNOPHARMACOL 21 3: 253-277 (1987) (TRAD MED RES UNIV MUHIMBILI MED CENT UNIV DAR ES SALAAM DAR ES SALAAM TANZANIA)

T16711	ETHNOBOTANICAL REVIEW OF MEDICINAL PLANTS FROM THAI TRADITIONAL BOOKS, PART 1: PLANTS WITH ANTIINFLAMMATORY,ANTI-ASTHMATIC AND ANTIHYPERTENSIVE PROPERTIES. PANTHONG,A: KANJANAPOTHI,D: TAYLOR,WC: J ETHNOPHARMACOL 18 3: 213-228 (1986)(DEPT PHARMACOL FAC MED CHIANG MAI UNIV CHIANG MAI 50002 THAILAND)
W00500	MOLLUSCICIDAL ACTIVITY OF PLANTS FROM NORTHEASTERN BRAZIL. SILVA,MJM: PINHEIRO DE SOUSA,M: ROUQUAYROL,MZ REV BRASIL FARM 52 : 117-123 (1971) (UFFC RIO DE JANIERO BRAZIL)
W01266	MEDICINAL PLANTS UTILIZED BY THE PIMA MONTANES OF CHIHUAHUA. PENNINGTON,CW AMER INDIGENA 33 : 213-232 (1973) (NO ADDRESS GIVEN)
W01284	FOLK MEDICINE IN TRINIDAD. SIMPSON,GE J AMER FOLKLORE 75 : 326-340 (1962) (NO ADDRESS GIVEN)
W01316	MEDICINAL PLANTS OF JAMAICA. III. ASPREY,GF: THORNTON,P WEST INDIAN MED J 4 : 69-82 (1955)(UNIV PENNSYLVANIA PHILADELPHIA PA USA)
W02855	PLANTAS MEDICINALES, AROMATICAS O VENENOSAS DE CUBA. MINISTERIO DE AGRICULTURA, REPUBLICA DE CUBA, HAVANA. ROIG Y MESA,JT BOOK 1945 : 872PP- (1945) (CUBA)
W02949	MOLLUSCICIDAL ACTIVITY OF PLANTS FROM NORTHEAST BRAZIL. PINHEIRO DE SOUSA,M: ROUQUAYROL,MZ: REV BRAS FPESQ MED BIOL 7 4: 389-394 (1974)(DEPT FARMACOL EXP CENT CIENC SAUDE UNIV FED CEARA CEARA BRAZIL)
W03612	TOXIC CARDIOMYOPATHY CAUSED BY CASSIA OCCIDENTALIS. II. BIOCHEMICAL STUDIES IN POISONED RABBITS. O'HARA,PJ: PIERCE,KR: VET PATHOL 11 2: 110-124 (1974) (COLL VET MED TEXAS A & M UNIV COLLEGE STATION TX USA)
W03638	POISONING WITH GRAINS OF CASSIA OCCIDENTALIS L. IS DUE TO A TOXIC ALBUMIN. MOUSSU,R: COMPT REND SOC BIOL 92 : 862-863 (1925)(NO ADDRESS GIVEN)
W03691	RECENT INVESTIGATIONS INTO THE TOXICITY OF PLANTS, ETC. NO. XV. VAN DER WALT,SJ: STEYN,DG: ONDERSTEPOORT J VET SCI ANIMAL IND 21 1: 45-55 (1946)(PHARMACOL & TOXICOL ONDERSTEPOORT SOUTH AFRICA)
W04330	THE ANTIBIOTIC ACTIVITY OF SOME EXTRACTS OF SOLANUM MAMMOSUM, CASSIA OCCIDENTALIS, AND CECROPIA SPECIES. GALLO,P: VALERI,H: REV MED VET Y PARASITOL 12 : 119-124 (1954)(NO ADDRESS GIVEN)
W04331	EFFECTS OF VEGETABLE DRUGS ON PATHOGENIC FUNGI. I. EFFECTS OF ANTHRAQUINONE-GLYCOSIDE CONTAINING CRUDE DRUGS UPON THE GROWTH OF PATHOGENIC FUNGI. ITO,K: OTA,N: BULL PHARM RESEARCH INST JAPAN 2 : 23-29 (1951) (OSAKA MED COLL OSAKA JAPAN)
W04336	CASSIA OCCIDENTALIS AS COFFEE SUBSTITUTE IN EGYPT. HASSAN,YM: EL-HINDAWY,S: BASSIONY,S: ABD ALLA,MA: EGYPT J HORT 1 2: 137-142 (1974)(FAC AGRIC AIN SHAMS UNIV CAIRO EGYPT)
W04414	EFFECTS OF VITAMIN E AND SELENIUM ON CASSIA OCCIDENTALIS INTOXICATION IN CATTLE. O'HARA,PJ: PIERCE,KR: READ,WK: AMER J VET RES 31 12: 2151-2156 (1970) (COLL VET MED TEXAS AN COLLEGE STATION TX USA)

W04415	ANTIBIOTIC ACTIVITY OF CASSIA OCCIDENTALIS. GAIND,KN: BUDHIRAJA,RD: KAUL,RN: INDIAN J PHARMACY 28 9: 248-250 (1966) (PANJAB UNIV CHANDIGARH UT INDIA)
AK1001	EFFICACY OF SOME NUPE MEDICINAL PLANTS AGAINST SALMONELLA TYPHI: AN IN VITRO STUDY. EVANS,CE: BANSO,A: SAMUEL,OA: J ETHNOPHARMACOL. 80 1: 21-4 (2002)(SCIENCE LAB TECH DEPT, FEDERAL POLYTECHNIC, NIGER STATE, BIDA, NIGERIA)
AK1002	PROTECTIVE EFFECT OF CASSIA OCCIDENTALIS L. ON CYCLOPHOSPHAMIDE-INDUCED SUPPRESSION OF HUMORAL IMMUNITY IN MICE. BIN-HAFEEZ,B: AHMAD,I: HAQUE,R: RAISUDDIN,S: J ETHNOPHARMACOL. 75 1: 13-8 (2001)(DEPT OF MEDICAL ELEMENTOLOGY AND TOXICOLOGY, JAMIA HAMDARD NEW DELHI, INDIA)
AK1003	IN-VIVO ANTIMALARIAL ACTIVITY OF CASSIA OCCIDENTALIS, MORINDA MORINDOIDES AND PHYLLANTHUS NIRURI. TONA,L: MESIA,K: NGIMBI,NP: CHRIMWANI,B: OKOND'AHOKA: CIMANGA,K: DE BRUYNE,T: APERS,S: HERMANS,N: TOTTE,J: PIETERS,L: VLIETINCK,AJ: ANN TROP MED PARASITOL. 95 1: 47-57 (2001)(FACULTY OF PHARMACY, UNI OF KINSHASA, KINSHASA, DEMOCRATIC REP OF CONGO)
AK1004	IN VITRO INHIBITION OF CARCINOGEN-INDUCED MUTAGENICITY BY CASSIA OCCIDENTALIS AND EMBLICA OFFICINALIS. SHARMA,N: TRIKHA,P: ATHAR,M: RAISUDDIN,S: DRUG CHEM TOXICOL 23 3: 477-84 (2000)(DEPT OF MEDICAL ELEMENTOLOGY AND TOXICOLOGY, JAMIA HAMDARD, NEW DELHI, INDIA)
AK1005	ANTIBACTERIAL ACTIVITY OF SOME FOLKLORE MEDICINAL PLANTS USED BY TRIBALS IN WESTERN GHATS OF INDIA. SAMY,RP: IGNACIMUTHU,S: J ETHNOPHARMACOL 69 1: 63-71 (2000)(ENTOMOLOGY RES INST, LOYOLA COLLEGE, CHENNAI, INDIA)
AK1006	ANTIMALARIAL ACTIVITY OF 20 CRUDE EXTRACTS FROM NINE AFRICAN MEDICINAL PLANTS USED IN KINSHASA, CONGO. TONA,L: NGIMBI,NP: TSAKALA,M: MESIA,K: CIMANGA,K: APERS,S: DE BRUYNE,T: PIETERS,L: TOTTE,J: VLIETINCK,AJ: J ETHNOPHARMACOL. 68 1-3: 193-203 (1999)(FAC OF PHARMACY, UNI OF KINSHASA, DEMOCRATIC REPUBLIC OF CONGO)
AK1007	PROTECTIVE EFFECT OF CASSIA OCCIDENTALIS EXTRACT ON CHEMICAL-INDUCED CHROMOSOMAL ABERRATIONS IN MICE. SHARMA, N: TRIKHA, P: ATHAR,M: RAISUDDIN,S: DRUG CHEM TOXICOL 22 4: 643-53 (1999)(DEPT OF MEDICAL ELEMENTOLOGY AND TOXICOLOGY, JAMIA HAMDARD, NEW DELHI, INDIA)
AK1008	HEPATOPROTECTIVE ACTIVITY OF LEAVES OF CASSIA OCCIDENTALIS AGAINST PARACETAMOL AND ETHYL ALCOHOL INTOXICATION IN RATS. JAFRI,MA: JALIS SUBHANI,M: JAVED,K: SINGH,S: J ETHNOPHARMACOL. 66 3: 355-61 (1999)(DEPT OF ILMUL ADVIA, FACULTY OF MEDICINE, JAMIA HAMDARD, NEW DELHI, INDIA)
AK1009	MUSCLE ATROPHY INDUCED IN BROILER CHICKS BY PARTS OF SENNA OCCIDENTALIS SEEDS. HARAGUCHI, M: CALORE,EE: DAGLI,ML: CAVALIERE,MJ: CALORE,NM: WEG,R: RASPANTINI,PC: GORNIAC,SL: VET RES COMMUN 22 4: 265-71 (1998)(SECTION OF PHARMACOLOGY, BIOLOGICAL INSTITUTE OF SAO PAULO, BRAZIL)
AK1010	IN VITRO ANTIBACTERIAL ACTIVITY OF ARGENTINE FOLK MEDICINAL PLANTS AGAINST SALMONELLA TYPHI. PEREZ,C: ANESINI,C: J ETHNOPHARMACOL 44 1: 41-6 (1994)(CATEDRA DE FARMACOLOGIA, FACULTAD DE ODONTOLOGIA, UNIVERSIDAD DE BUENOS AIRES, ARGENTINA)

AK1011	PLANTS USED IN GUATEMALA FOR THE TREATMENT OF DERMATOPHYTIC INFECTIONS. 2. EVALUATION OF ANTIFUNGAL ACTIVITY OF SEVEN AMERICAN PLANTS. CACERES,A: LOPEZ,B: JUAREZ,X: DEL AGUILA,J; GARCIA,S: J ETHNOPHARMACOL 40 3: 207-13 (1993)(FACULTAD DE CIENCIAS QUIMICAS Y FARMACIA, UNIVERSIDAD DE SAN CARLOS, CIUDAD UNIVERSITARIA, GUATEMALA)
AK1012	TOXIC EFFECT OF THE ROASTED AND UNROASTED BEANS OF CASSIA OCCIDENTALIS IN GOATS. SULIMAN, HB: SHOMMEIN,AM: VET HUM TOXICOL 28 1: 6-11 (1986)
AK1013	PRELIMINARY ISOLATION OF A MYODEGENERATIVE TOXIC PRINCIPLE FROM CASSIA OCCIDENTALIS. HEBERT,CD: FLORY,W: SEGER,C: BLANCHARD,RE: AM J VET RES. 44 7: 1370-4 (1983)
AK1014	THE TOXICITY OF CASSIA OCCIDENTALIS TO GOATS. SULIMAN,HB: WASFI,IA: ADAM,SE: VET HUM TOXICOL. 24 5: 326-30 (1982)
AK1015	INSECTICIDAL AND VERTEBRATE TOXICITY ASSOCIATED WITH ETHNOBOTANICALS USED AS POST-HARVEST PROTECTANTS IN GHANA. BELMAIN,SR: NEAL,GE: RAY,DE: GOLOB,P: FOOD CHEM TOXICOL 39 3: 287-91 (2001)(NATURAL RESOURCES INSTITUTE, UNI OF GREENWICH, CENTRAL AVE, CHATHAM MARITIME, UK)
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