Agricultural Research Service

Dr. Duke's Phytochemical and Ethnobotanical Databases

Ethnobotanical uses

Opuntia ficus-indica (CACTACEAE)

Burn(Radiation) Eb27: 215; Callus Hartwell; Corn Hartwell; Decongestant* Eb27: 215; Diabetes* Eb27: 212; Diarrhea Bliss; Diuretic Woi.Syria; Emollient* Eb27: 215, FontQuer, Woi.Syria; Favus Bliss; Internulcer Eb27: 215; Kidney Eb32: 24; Leprosy Eb33: 3; Measles Eb32: 24; Piles Bliss; Scald Eb27: 215; Sore Eb27: 215; Sunburn Eb27: 215; Tumor Hartwell; Wound Eb27: 215

* = Chemical(s) found in plant shown to be effective for the ailment medicated
** = Plant itself shown to be effective for the ailment medicated

Phytochemical Database, USDA - ARS - NGRL, Beltsville Agricultural Research Center, Beltsville, Maryland
Wed Oct 27 14:43:10 EDT 2004

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Chemicals and their Biological Activities in: *Opuntia ficus-indica* (L.) MILL. (Cactaceae) -- Indian Fig, Nopal, Nopalito, Prickly Pear

Chemicals

ALANINE *Bud 7,180 ppm; Seed 8,480 ppm;*
Antioxidant; Cancer-Preventive; Oxidant

ARABINOSE *Gum*:
No activity reported.

ARGININE *Bud 4,955 ppm; Seed 27,100 ppm;*
Antidiabetic?; Antiencephalopathic; Antihepatitic; Antihypertensive; Antiimpotence; Antiinfertility *4 g/day*; Antioxidant?; Aphrodisiac *3 g/day*; Diuretic; Hypoammonemic; NO-Genic; Pituitary-Stimulant; Spermigenic *4 g/day*; Vasodilator

ASCORBIC-ACID *Fruit 65 - 1,690 ppm*
Acidulant *FEMA 6,000*; Aldose-Reductase-Inhibitor; Analgesic *5-10 g/day*; Angiotensin-Receptor-Blocker; AntiAGE *2,000 mg/day*; Antiaggregant; Antiaging *400 mg/day*; Antiarthritic *1 g/day*; Antiasthmatic *1,000 mg/day*; Antiatherosclerotic; Antibacterial; Anticataract *350 mg/day 400 mg/day*; Anticold *1-2 g/man/day*; AntiCrohn's *50-100 mg/day/orl/man*; Antidecubitic *500 mg/man/2x/day*; Antidepressant *2,000 mg/day*; Antidiabetic; Antidote (Aluminum); Antidote (Cadmium); Antidote (Lead); Antidote (Paraquat); Antieczemic *3.5-5 g/day*; Antiedemic *1 g/man/day*; Antiencephalitic; Antigingivitic; Antiglaucomic *2 g/day*; Antihemorrhagic *1 g/man/day*; Antihepatitic *2-6 g/man/day*; Antihepatotoxic; Antiherpetic *1-5 g/day*; Antihistaminic *2 g/day orl man*; Antihypertensive; Antiinfertility *1 g/day*; Antiinflammatory; Antilepric *1.5 g/man/day*; Antimeasles; Antimigraine; Antimutagenic; Antinitrosic *1 g/man/day*; Antiobesity *1 g 3 x/day*; Antiorchitic; Antiosteoarthritic *1 g 2 x/day*; Antiosteoporotic *500 mg/day*; Antioxidant *100 ppm*; Antiparkinsonian *1 g 2 x/day*; Antiparotitic; Antiperiodontitic; Antipneumonic; Antipodriac; Antipoliomyelitic; Antipyretic; Antiradicular; Antiscorbutic *10 mg/man/day*; Antiseptic *4-8 g/day MIC=3.3-217 mg/ml*; Antishingles; Antisyndrome-X *1-4 g/day*; Antitumor (Lung); Antiulcer; Antiviral *1-5 g/day*; Apoptotic *1-10 mM*; Asthma-preventive *1,000 mg/day/orl*; Beta-Adrenergic Receptor Blocker; Beta-Glucuronidase-

Inhibitor *1.5 g/day/man*; Calcium-Antagonist; Cancer-Preventive; Cold-preventive *1-2 g/day*; Collagenic; Detoxicant; Diuretic *700 mg/man/orl*; Fistula-Preventive; Hypocholesterolemic *300-1,000 mg/day*; Hypoglycemic; Hypotensive *1,000 mg/man/day*; Immunostimulant; Interferonogenic; Lithogenic; Mucolytic *1 g/woman/day*; Pesticide; Uricosuric *4 g/man/day*; Urinary-Acidulant; Vasodilator; Vulnerary

ASH ***Bud*** *235,000 ppm*; ***Fruit*** *3,000 - 27,000 ppm* ***Seed*** *31,700 - 241,000 ppm*
No activity reported.

ASPARTIC-ACID ***Bud*** *8,315 ppm*; ***Seed*** *15,900 ppm*;
Antimorphinic; Neuroexcitant; Roborant

BETA-CAROTENE ***Bud*** *0.3 ppm*; ***Fruit*** *0.08 - 0.09 ppm*
Allergenic; Androgenic?; Antiacne; Antiaging; Antiasthmatic; Anticancer; Anticarcinomic; Anticoronary *50 mg/man/2 days*; Antihyperkeratotic; Antiichythyotic; Antileukoplakic; Antilupus *150 mg/man/day/2 mos*; Antimastitic; Antimutagenic; Antioxidant; Antiozenic; Antiphotophobic *30-300 mg/man/day*; Antipityriasic; AntiPMS; Antiporphyric; Antiproliferant; Antipsoriac; Antiradicular; Antistress; Antitumor; Antiulcer *12 mg 3x/day/man/orl*; Antixerophthalmic; Cancer-Preventive *22 ppm*; Colorant; Immunostimulant *180 mg/man/day/orl*; Interferon-Synergist; Mucogenic; Phagocytotic; Prooxidant *20 ug/g*; Thymoprotective; Ubiquiot

BETA-SITOSTEROL ***Flower***:
Androgenic; Anorexic; Antiadenomic; Antiandrogenic; Antibacterial; Anticancer (Breast); Antiedemic *IC54=320 mg/kg orl*; Antiestrogenic; Antifeedant; Antifertility; Antigonadotrophic; Antihyperlipoproteinaemic; Antiinflammatory; Antileukemic; Antilymphomic; Antimutagenic *250 ug/mL*; Antiophidic *2.3 mg mus*; Antioxidant *IC44=10 uM*; Antiprogestational; Antiprostaglandin *30 mg/day/12 wks*; Antiprostatadenomic; Antiprostatitic *10-20 mg/3 x/day/orl man*; Antipyretic; Antitumor (Breast); Antitumor (Cervix); Antitumor (Lung); Antiviral; Artemicide *LC50=110 ppm*; Cancer-Preventive; Candidicide; Estrogenic; Febrifuge; Gonadotrophic; Hepatoprotective; Hypocholesterolemic *2-6 g/man/day/orl 9-3,330 mg/man/day/orl*; Hypoglycemic; Hypolipidemic *2-6 g/day*; Pesticide; Spermicide; Ubiquiot; Ulcerogenic *500 mg/kg ipr rat*

BETANIN ***Fruit***:
Antioxidant; Antiperoxidant; Heme-Sparing; Lipoxygenase-Inhibitor *IC50=0.5 uM*; Pigment

CALCIUM ***Be*** *560 ppm*; ***Fruit*** *180 - 3,065 ppm*
Antiallergic *500 mg/day*; Antianxiety; Antiatherosclerotic; Antidepressant; Antidote (Aluminum); Antidote (Lead); Antihyperkinetic; Antihypertensive; Antiinsomniac; Antiosteoporotic; Antiperiodontitic *750 mg/day*; AntiPMS *1 g/day*; Antitic; Calcium-Channel-Blocker; Diuretic; Hypocholesterolemic *500 mg/day*; Hypotensive *1 g/day*; Vasodilator

CALCIUM-OXALATE ***Fruit***:
Emetic; Inflammatory; Laxative; Lithogenic

CARBOHYDRATES ***Bud*** *118,600 ppm*; ***Fruit*** *56,000 - 892,000 ppm* ***Seed*** *482,000 - 558,000 ppm*

No activity reported.

CELLULOSE *Fruit 13,000 ppm*;
Hemostat

CITRIC-ACID *Fruit 475 - 4,560 ppm*
Allergenic; Alpha-Amylase-Inhibitor; Antiaphthic *20,000 ppm*; Antiatherosclerotic; Antibacterial; Anticalculic; Anticoagulant; Antimutagenic; Antioxidant Synergist; Antiseborrheic; Antiseptic; Antitubercular; Antitumor; Disinfectant; FLavor *FEMA 370-4,400*; Hemostat; Irritant; Laxative?; Litholytic; Mycobactericide; Odontolytic; Refrigerant

COPPER *Seed 3.4 ppm*;
Antiarthritic; Antidiabetic *2-4 mg/day*; Antiinflammatory; Antinociceptive; Contraceptive; Hypocholesterolemic; Schizophrenigenic

CYSTEINE *Seed 5,740 ppm*;
AntiAddisonian; Antibiotic; Anticataract; Anticytotoxic; Antiophthalmic; Antioxidant; Antitumor; Antiulcer; Cancer-Preventive; Detoxicant; Glutathionergic; Ophthalmic-Antialkali; Pesticide

DEHYDROASCORBIC-ACID *Fruit Juice 30 ppm*;
No activity reported.

FAT *Bud 24,800 ppm*; *Fruit 4,000 - 29,400 ppm Seed 54,000 - 182,000 ppm*
No activity reported.

FIBER *Bud 89,400 ppm*; *Fruit 11,000 - 59,000 ppm Seed 111,000 - 524,000 ppm*
Angiotensin-Receptor-Blocker; Antidiabetic; Antihypertensive; Antiobesity; Antitumor; Antiulcer; Beta-Blocker; Cancer-Preventive; Cardioprotective; Diuretic; Hypocholesterolemic; Hypotensive *10 g/man/day/orl*; Hypouricemic; Laxative; Vasodilator

FRUCTOSE *Fruit 4,500 - 44,100 ppm*
Antialcoholic; Antidiabetic; Antihangover; Antiketotic; Antinauseant; Laxative; Neoplastic; Sweetener *2 x glucose*

GALACTOSE *Gum*:
Sweetener *0.32 x sucrose*

GALACTURONIC-ACID *Stem*:
No activity reported.

GLUCOSE *Fruit 50 - 480 ppm*
Acetylcholinergic; Antiedemic; Antihepatotoxic; Antiketotic; Antivaricose; Hyperglycemic; Memory-Enhancer

GLUTAMIC-ACID *Bud 16,000 ppm*; *Seed 37,500 ppm*;
Antialkali? *500-1,000 mg/day/orl/man*; Antiepileptic; Antihyperammonemic; Antilithic; Antiprostatitic *125-250 mg 3 x/day*; Antiretardation; Anxiolytic; Neurotoxic

GLYCINE *Bud 4,745 ppm*; *Seed 14,200 ppm*;

Antiacid; Antialdosteronic; Antidote (Hypoglycin-A); Antiencephalopathic; Antigastritic; Antiprostatitic *125-250 mg 3 x/day*; Antipruritic; Antisickling; Antiulcer; Cancer-Preventive; Neuroinhibitor; Uricosuric

HISTAMINE ***Bud*** *2,555 ppm*; ***Seed*** *4,550 ppm*;
Allergenic; Antichilblain; AntiMeniere's; Antimigraine; Bronchoconstrictor; Bronchostimulant; Cardiovascular *0.15 mg/kg ivn rbt*; Gastrostimulant; Histaminic *Antidote:Adrenaline*; Hypotensive; Irritant; Myostimulant; Radioprotective; Secretogogue; Spasmogenic; Tachycardic; Ulcerogenic *100 mg/kg ipr rat*; Vasodilator

INDICAXANTHIN ***Fruit***:
Pigment

IRON ***Fruit*** *12 - 65 ppm* ***Seed*** *100 ppm*;
Antiakathisic; Antianemic; Anticheilitic; Antimenorrhagic *100 mg/day/wmn/orl*

ISOBETANIN ***Fruit***:
Pigment

ISOLEUCINE ***Bud*** *4,140 ppm*; ***Seed*** *6,775 ppm*;
Antiencephalopathic?; Antipellagric; Essential

ISORHAMNETIN-GLUCOSIDE ***Flower***:
No activity reported.

KAEMPFEROL ***Flower***:
11B-HSD-Inhibitor; 5-Lipoxygenase-Inhibitor *IC50 (uM)=20*; Aldose-Reductase-Inhibitor *100 uM*; Antiaflatoxin *IC50=3.28 ppm IC50=8.73 uM*; Antiaggregant *30 uM*; Antiallergic; Antibacterial *20 ug/ml*; Anticancer; Antifertility *250 mg/kg day/60 days/orl rat*; Antigingivitic *20 ug/ml*; Antiherpetic *23-92 ug/ml*; Antihistaminic; Antiimplantation; Antiinflammatory *20 mg/kg 200 mg/kg ipr rat*; Antileukemic *IC50=3.1 ug/ml*; Antilymphocytic; Antimutagenic *ID50=10-40 nM*; Antioxidant *3/4 quercetin IC50=1.2 ug/ml IC50=40 uM*; Antiperiodontic *20 ug/ml*; Antiplaque; Antiradicular *7 x quercetin*; Antiseptic *20 ug/ml*; Antiserotonin *200 mg/kg ipr rat*; Antispasmodic; Antistaphylococcic; Antitumor; Antitumor-Promoter; Antiulcer *50-200 mg/kg ipr rat*; Antiviral *23-92 ug/ml*; Apoptotic *60 uM*; Aromatase-Inhibitor *IC12=1 uM/l*; cAMP-Phosphodiesterase-Inhibitor; Cancer-Preventive; Carcinogenic; Choleretic; Copper-Chelator; COX-2-Inhibitor; Cyclooxygenase-Inhibitor *IC50 (uM) =20*; Cytotoxic; Diaphoretic?; Diuretic; Estrogenic *EC50=0.1-25 uM/l EC50=0.56 uM*; Hepatoprotective *IC50=1.30 ppm IC50=5.46 uM*; HIV-RT-Inhibitor *IC50=50-150 ug/ml*; Hypotensive; Inotropic; Iodothyronine-Deiodinase-Inhibitor; Lipoxygenase-Inhibitor; MAO-Inhibitor; Mutagenic; Natriuretic; Neuroprotective; PAF-Inhibitor; Pesticide; Protisticide; Quinone-Reductase-Inducer *3 uM*; Teratologic; Topoisomerase-I-Inhibitor; Topoisomerase-II-Inhibitor *IC50=8.1 ug/ml*; Tyrosinase-Inhibitor *ID50=230 uM*; Uterotrophic *EC50=0.1-25 uM/l*; Vasodilator

KILOCALORIES ***Bud*** *1,140 /kg*; ***Fruit*** *670 - 3,600 /kg*
No activity reported.

LEUCINE ***Seed*** *12,800 ppm*;
Antiencephalopathic; Essential

LINOLEIC-ACID *Seed 39,640 - 133,590 ppm*

5-Alpha-Reductase-Inhibitor; Antiacne; Antialopecic; Antianaphylactic; Antiandrogenic; Antiarteriosclerotic; Antiarthritic; Anticoronary; Antieczemic; Antifibrinolytic; Antigranular; Antihistaminic; Antiinflammatory *IC50=31 uM*; Antileukotriene-D4; Antimenorrhagic; AntiMS; Antiprostatitic; Cancer-Preventive; Carcinogenic; Comedolytic; Hepatoprotective; Hypocholesterolemic; Immunomodulator; Insectifuge; Metastatic; Nematicide; Propecic

LINOLEOYLDIOLEIN *Seed*:

No activity reported.

LUTEOLIN *Flower*:

Aldose-Reductase-Inhibitor *EC=3 ppm IC50=0.45 uM rat*; Antiallergic; Antiatherogenic; Antibacterial *MIC=500 ug/ml*; Anticarcinogenic; Anticarcinomic; Anticataract *EC=3 ppm*; Anticomplementary; Antidermatic; Antiestrogenic; Antifeedant *IC52=<1,000 ppm diet*; Antiherpetic *11-23 ug/ml*; Antihistaminic *<10-15 uM*; AntiHIV; Antiinflammatory *=indomethacin*; Antileukemic *20-50 uM*; Antilymphomic; Antimelanomic; Antimutagenic *ID50=2-5 nM*; Antinociceptive; Antioxidant *IC50=10 uM*; Antipolio; Antiproliferant; Antispasmodic; Antitumor *1-50 uM*; Antitumor (brain); Antitumor (Colon); Antitumor (Kidney); Antitumor (Lung); Antitumor (Ovary); Antitumor (Pancreas); Antitumor (Skin) *20 uM*; Antitumor (Stomach); Antitumor (Thyroid) *12-50 uM*; Antitussive; Antiviral *11-23 ug/ml*; Aphidifuge; Apoptotic *12-50 uM*; Aromatase-Inhibitor *IC35=1 uM/l*; Beta-Glucuronidase-Inhibitor *IC50=~40 uM*; Calcium-Antagonist *IC50=1.2 uM rbt*; Cancer-Preventive; Chemopreventive; Choleretic; Cytotoxic *1-50 uM*; Deiodinase-Inhibitor; Differentiator *IC>40=40 uM*; Diuretic; Estrogenic *58% genistein*; Hepatoprotective; Hyaluronidase-Inhibitor *IC50+=100-250 uM*; Iodothyronine-Deiodinase-Inhibitor; Lipoxygenase-Inhibitor; Metalloproteinase-Inhibitor; MMP-9-Inhibitor *20 uM*; Myorelaxant; NEP-Inhibitor *IC50=>42 uM*; Pesticide; Proliferant; Prostaglandin-Synthetase-Inhibitor; Protein-Kinase-C-Inhibitor *IC70=50 uM*; PTK-Inhibitor *10-100 uM*; Succinoxidase-Inhibitor; Topoisomerase-I-Inhibitor; Vasodilator; Xanthine-Oxidase-Inhibitor *IC50=0.11 ug/ml*

LYSINE *Bud 6,005 ppm*; *Seed 6,275 ppm*;

Antialkalotic; Antiherpetic *0.5-3 g/day*; Essential; Hypoarginanemic *250 mg/kg*

MAGNESIUM *Bud 1,420 ppm*; *Seed 790 ppm*;

Antiaggregant *400 mg/day*; Antianginal; Antianorectic; Antianxiety; Antiarrhythmic; Antiarthritic; Antiasthmatic; Antiatherosclerotic; Anticonvulsant; Anticoronary; Antidepressant; Antidiabetic *400-800 mg/man/day*; Antidysmenorrheic *100 mg 4 x/day*; Antiepileptic *450 mg/day*; Antiglaucomic; Antihyperkinetic; Antihypertensive; Antihypoglycemic; Antiinflammatory *100 mg 4 x/day*; Antiinsomniac; Antilithic; Antimastalgic; Antimigraine *200 mg/day*; Antineurotic; Antiosteoporotic *500-1,000 mg/day/wmn/orl*; AntiPMS *400-800 mg/day/wmn/orl*; Antiretinopathic *400 mg/day*; Antispasmophilic *500 mg/day*; Antistroke *400 mg/day*; Antisyndrome-X *400 mg/man/day*; Calcium-Antagonist; CNS-Depressant; Diuretic; Hypocholesterolemic *400 mg/day*; Hypotensive *260-500 mg/day*; Insulinogenic *400 mg/day*; Myorelaxant *100 mg 4 x/day*; Uterorelaxant; Vasodilator

MALIC-ACID *Fruit 180 - 1,700 ppm*

Antiatherosclerotic; Antibacterial; Antioxidant Synergist; Antiseborrheic; Antiseptic; Antitubercular; Antitumor; Bacteristat; Bruchiphobe; Hemopoietic; Laxative?;

Mycobactericide; Pesticide; Sialogogue

METHIONINE *Bud 1,890 ppm*; *Seed 4,830 ppm*;
Anticataract; Antidote (Acetaminophen) *10 g/16hr/man/orl*; Antidote (Paracetamol); Antieczemic; Antihepatotic; Antioxidant; Antiparkinsonian *1-5 g/day*; Cancer-Preventive; Emetic; Essential; Glutathionigenic; Hepatoprotective; Lipotropic; Urine-Acidifier *200 mg/3x/day/man/orl*; Urine-Deodorant

NEOBETANIN *Plant*:
No activity reported.

NIACIN *Bud 4.6 ppm*; *Fruit 3 - 27 ppm*
Allergenic; Antiacrodynic; Antiallergic *50 mg/2x/day*; Antiamblyopic; Antianginal; Antichilblain; Anticonvulsant *3 g/day*; Antidermatitic; Antidysphagic; Antiepileptic; Antihistaminic *50 mg/2x/day*; Antihyperactivity *1.5-6 g/day*; Antiinsomnic *1 g/day*; AntiMeniere's; Antineuralgic; Antiparkinsonian *100 mg/day*; Antipellagric; Antiscotomic; Antispasmodic *100 mg/2x/day*; Antivertigo; Cancer-Preventive; Hepatoprotective; Hypoglycemic; Hypolipidemic; Sedative; Serotoninergic; Vasodilator

OLEIC-ACID *Seed 4,750 - 16,015 ppm*
5-Alpha-Reductase-Inhibitor; Allergenic; Alpha-Reductase-Inhibitor; Anemiagenic; Antialopecic; Antiandrogenic; Antiinflammatory *IC50=21 uM*; Antileukotriene-D4; Cancer-Preventive; Choleretic *5 ml/man*; Dermatitigenic; FLavor *FEMA 1-30*; Hypocholesterolemic; Insectifuge; Irritant; Percutaneostimulant; Perfumery; Propecic

OPUNTIAXANTHIN *Fruit*:
No activity reported.

PALMITIC-ACID *Seed 6,480 - 21,840 ppm*
5-Alpha-Reductase-Inhibitor; Antialopecic; Antiandrogenic; Antifibrinolytic; Antioxidant *IC40=60*; FLavor *FEMA 1*; Hemolytic; Hypercholesterolemic; Lubricant; Nematicide; Pesticide; Propecic; Soap

PALMITOYLDILINOLEIN *Seed*:
No activity reported.

PECTIN *Fruit*:
Antiatheromic *15 g/man/day*; Antibacterial; Antidiabetic *10 g/man/day/orl*; Antidiarrheic; Antimutagenic; Antiobesity; Antitumor (Colon); Antitussive; Antiulcer; Cancer-Preventive; Chemopreventive; Demulcent; Fungicide; Hemostat; Hypocholesterolemic; Hypoglycemic; Peristaltic; Pesticide

PENDULETIN *Flower*:
Antipolio; Antirhinoviral; Antiviral; Pesticide

PHENYLALANINE *Bud 4,250 ppm*; *Seed 8,255 ppm*;
AntiADD *587 mg/day/orl*; Antidepressant *50-4,000 mg/day/man*; Antiparkinsonian *200-500 mg/day/man*; Antisickling *690 ug/ml*; Antivitiligic *100 mg/kg/day/orl/man*; Monoamine-Precursor; Tremorigenic *1,600-12,600 mg/man/day*

PHOSPHORUS *Bud 243 ppm*; ***Fruit** 320 - 1,985 ppm **Seed** 1,605 ppm*;
Antiosteoporotic; Immunostimulant; Osteogenic

PISCIDIC-ACID *Plant*:
No activity reported.

PISCIDIC-ACID-DIETHYLETHER *Flower*:
No activity reported.

PISCIDIC-ACID-METHYL-ESTER *Flower*:
No activity reported.

PISCIDIC-ACID-MONOETHYLETHER *Flower*:
No activity reported.

POTASSIUM *Bud 2,600 ppm*; ***Fruit** 700 - 6,615 ppm **Seed** 1,720 ppm*;
Angiotensin-Receptor-Blocker; Antiarrhythmic; Antidepressant; Antifatigue; Antihypertensive; Antispasmodic; Beta-Blocker; Cardiotoxic *18,000 mg/man/day*; Diuretic; Vasodilator

PROLINE *Bud 3,995 ppm*; ***Seed** 10,500 ppm*;
No activity reported.

PROTEIN *Bud 110,300 ppm*; ***Fruit** 11,000 - 73,500 ppm **Seed** 121,000 - 175,300 ppm*
No activity reported.

QUERCITRIN *Flower*:
ACE-Inhibitor *IC50=0.67 mM/*; Aldose-Reductase-Inhibitor *0.1-100 uM 0.5-4 ug/ml IC50=2 uM IC50=64 uM rat IC55=0.1 uM IC55=0.15 uM*; Antiarrhythmic; Antibacterial; Anticataract; Antiedemic; Antifeedant *IC52=<1,000 ppm diet*; Antiflu; Antihemorrhagic; Antihepatotoxic; Antiherpetic; Antiinflammatory; Antimutagenic *ID50=2-5 nM*; Antioxidant *IC50=120 uM*; Antipurpuric; Antispasmodic; Antistaphylococcic *0.412%*; Antithrombogenic; Antitumor; Antiulcer; Antiviral; Cancer-Preventive; Cardiotonic; Choleretic; CNS-Depressant; Cyclooxygenase-Activator *200 uM*; Detoxicant; Diuretic; Dye; Hemostat; Hepatotonic; Hypoglycemic; Hypotensive; Insectiphile; MAO-A-Inhibitor; MAO-Inhibitor; Paralytic; Pesticide; Vasopressor

QUINIC-ACID *Fruit 150 - 1,400 ppm*
Choleretic

RHAMNOSE *Gum*:
No activity reported.

RIBOFLAVIN *Bud 0.6 ppm*; ***Fruit** 0.2 - 2.2 ppm*
Antiarabiflavinotic *2-10 mg orl/day*; Anticarpal-Tunnel *50 mg/day*; Anticataract *15 mg/day*; Anticheilitic; Antidecubitic; Antiglossitic; Antikeratitic; Antimigraine; Antipellagric; Antiphotophobic; Cancer-Preventive

RUTIN *Flower*:
Aldose-Reductase-Inhibitor *100 uM 4 ug/ml*; Allelochemic; Antiallergic; Antiapoplectic;

Antiatherogenic; Antibacterial; Anticancer; Anticapillary-Fragility *20-100 mg orl/man*; Anticataract; Anticlastogen; Anticonvulsant; AntiCVI *270 mg/man/day*; Antidementia; Antidermatitic; Antidiabetic; Antiedemic *270 mg/day/orl man*; Antierythemic; Antifeedant; Antiglaucomic *60 mg/day*; Antihematuric; Antihemorrhoidal; Antihepatotoxic; Antiherpetic; Antihistaminic; Antihypertensive; Antiinflammatory *20 mg/kg*; Antimalarial *IC50=>100 ug/ml*; Antimutagenic *ID50=2-5 nM*; Antinephritic; Antinociceptive; Antioxidant *IC28=30 ppm IC50=120 uM IC54=10 uM*; Antiplatelet; Antiprotozoal; Antipurpuric; Antiradicular *9 x quercetin*; Antispasmodic; Antisunburn; Antithrombogenic; Antitrypanosomic *100 mg/kg*; Antitumor; Antitumor-Promoter; Antiulcer; Antivaricose; Antiviral; cAMP-Phosphodiesterase-Inhibitor; Cancer-Preventive; Capillariprotective; Catabolic; Estrogenic?; Hemostat; Hepatomagenic *20,000 ppm (diet) rat*; Hepatoprotective *20 mg/kg rat*; Hypocholesterolemic; Hypotensive; Immunomodulator; Insecticide; Insectiphile; Juvabional; Larvistat *IC95=4,000-8,000 ppm diet*; Lipoxygenase-Inhibitor *IC75=2.5 mM*; Mutagenic; Myoprotective; Myorelaxant; Oviposition-Stimulant; Pesticide; Protisticide; Radioprotective; Sunscreen; Topoisomerase-II-Inhibitor *IC50=1 ug/ml*; Vasodilator; Vasopressor

SERINE ***Bud*** *3,830 ppm*; ***Seed*** *7,665 ppm*;
Cancer-Preventive

SHIKIMIC-ACID ***Fruit*** *25 - 220 ppm*
Analgesic; Anticancer; Anticonvulsant; Antioxidant *7 x quercetin*; Antiradicular; Antispasmodic; Antitumor; Antitumor-Promoter; Bruchifuge; Cancer-Preventive; Carcinogenic; Ileorelaxant; Mutagenic; Pesticide

SODIUM ***Bud*** *90 ppm*; ***Seed*** *714 ppm*;
Hypertensive

STEARIC-ACID ***Seed*** *3,130 - 10,555 ppm*
5-Alpha-Reductase-Inhibitor; Cosmetic; FLavor *FEMA 2-4,000*; Hypocholesterolemic; Lubricant; Perfumery; Propecic; Suppository

SUCROSE ***Fruit***:
Aggregant; Antihiccup *1 tsp*; Antiophthalmic; Antioxidant; Atherogenic; Collyrium; Demulcent; Flatugenic; Hypercholesterolemic; Preservative; Sweetener *1 x sucrose*; Triglycerigenic; Uricogenic; Vulnerary

SUGARS ***Fruit*** *56,000 - 560,000 ppm*
No activity reported.

THIAMIN ***Bud*** *0.1 ppm*; ***Fruit*** *0.1 - 1.3 ppm*
Analgesic *1-4 g/day*; Antialcoholic; Antialzheimeran *100-3,000 mg/day*; Antianorectic; Antibackache *1-4 g/day*; Antiberiberi; Anticardiospasmic; Anticolitic; Antidecubitic; Antideliriant; Antiencephalopathic; Antifatigue; Antigastritic; Antiheartburn; Antiherpetic; Antimigraine; Antimyocarditic; Antineuralgic; Antineurasthenic; Antineuritic; Antineuropathic *50 mg*; Antipoliomyelitic; Insectifuge *75-150 mg/man/day*; Pesticide

THREONINE ***Bud*** *3,845 ppm*; ***Seed*** *7,330 ppm*;
Antioxidant?; Antiulcer; Essential; FLavor *FEMA 1,000*

TOCOPHEROL *Bud 2.5 ppm*;
5-HETE-Inhibitor; Allergenic; Analgesic *100 IU 3 x day*; Antiaggregant; Antiaging; Antialzheimeran *2,000 IU*; Antianginal *1,067 mg/man/day*; Antiarteriosclerotic; Antiatherosclerotic; Antibronchitic; Anticancer (Breast) *IC50=125 ug/ml*; Anticariogenic; Anticataract; Antichorea; Antichoreic; Anticoronary *100-200 IU/day*; Antidecubitic; Antidermatitic; Antidiabetic *600-1,200 mg/day*; Antidysmenorrheic; Antiepitheleomic; Antifibrositic; Antiherpetic; Antiinflammatory; Antiischemic; Antileukemic *100-250 uM*; Antileukotriene; Antilithic *600 mg/day*; Antilupus; Antimastalgic; AntiMD; AntiMS; Antimyoclonic; Antineuritic; Antinitrosaminic; Antiophthalmic; Antiosteoarthritic; Antioxidant *IC36=10 uM IC50=30 ug/ml IC95=650 uM*; Antiparkinsonian; AntiPMS *300 IU 2 x day*; Antiproliferant *IC50=150 ug/ml*; Antiradicular; Antiretinopathic?; Antisenility; Antisickling; Antispasmodic *300 mg/man/day*; Antisterility; Antistroke; Antisunburn; Antisyndrome-X; Antithalassemic; Antithrombotic *600 IU/day*; Antithromboxane-B2; Antitoxemic; Antitumor *7 uM ckn*; Antitumor (Breast) *100-250 uM IC50=125 ug/ml*; Antitumor (Colorectal) *500-10,000 uM*; Antitumor (Prostate) *100-250 uM*; Antiulcerogenic *67 mg/man/3 x/day/orl*; Apoptotic *100-250 uM*; Cancer-Preventive; Cerebroprotective; Circulatory-Stimulant; Hepatoprotective; Hypocholesterolemic *100-450 IU/man/day*; Hypoglycemic *600 IU/man/day*; Immunostimulant *60-800 IU*; Insulin-Sparing *1,000 IU*; Lipoxygenase-Inhibitor; Ornithine-Decarboxylase-Inhibitor *400 mg/kg*; P21-Inducer *500-10,000 uM*; Phospholipase-A2-Inhibitor; Protein-Kinase-C-Inhibitor *10-50 uM IC50=450 uM*; Vasodilator

TRYPTOPHAN *Seed 1,665 ppm*;
Analgesic *750 mg/4x/day/orl/man*; Antianxiety *500-1,000 mg/meal*; Antidementia *3 g/day*; Antidepressant *1-3 g/3x/day/orl/man*; Antidyskinetic *2-8 g/orl/wmn/day*; Antihypertensive; Antiinsomniac *1-3 g/day*; Antimanic *12 g/man/day/orl*; Antimenopausal *6 g/day*; Antimigraine *500 mg/man/4x/day*; Antioxidant *125 ug/ml*; Antiparkinsonian *2 g 3 x/day*; Antiphenylketonuric; Antiprostaglandin *250 pg/ml*; Antipsychotic *12 g/man/day*; Antirheumatic; Antiscoliotic; Carcinogenic; Essential; Hypnotic; Hypoglycemic; Hypotensive *3 g/day*; Insulinase-Inhibitor; Insulinotonic; Monoamine-Precursor; Prolactinogenic; Sedative *3-10 g/man/day*; Serotoninergic *6-12 g/day/orl/man*; Tumor-Promoter

TYROSINE *Bud 3,220 ppm*; *Seed 6,590 ppm*;
Antidepressant?; Antiencephalopathic; Antiparkinsonian *100 mg/kg/day*; Antiphenylketonuric; Antiulcer *256 mg scu 400 mg/kg ipr rat*; Cancer-Preventive; Monoamine-Precursor

URONIC-ACID *Gum*:
No activity reported.

VALINE *Bud 5,485 ppm*; *Seed 10,500 ppm*;
Antiencephalopathic; Essential; FLavor *FEMA 1,000-2,000*

VIT-D0.07 *Bud*:
No activity reported.

WATER *Bud 952,600 ppm*; *Fruit 814,000 - 86,400 ppm Seed 53,000 - 136,000 ppm*
No activity reported.

XYLOSE ***Gum***:
Antidiabetic; Diagnostic; Dye

ZINC ***Seed 15 ppm***;
ACE-Inhibitor; Antiacne *135 mg/day*; Antiacrodermatitic *8-34 mg/day/orl/chd*; Antialopecic; Antialzheimeran *50 mg/day*; Antianorexic; Antiarthritic? *50 mg/3x/day/orl/man*; Anticanker *100 mg/day*; Anticataract *30 mg/day*; Anticoeliac; Anticold *50 mg*; Anticolitic; Anticoronary *30 mg/day*; AntiCrohn's; Antidandruff; Antidiabetic; Antidote (Cadmium); Antieczemic *150 mg/day*; Antiencephalopathic; Antiepileptic *100 mg/day*; Antifuruncular *45 mg/3x/day/man*; Antiherpetic? *25 mg/day*; Antiimpotence; Antiinfective *50 mg/day*; Antiinfertility *60 mg/day*; Antiinsomniac; Antilepric; Antileukonychic; Antiobesity *30 mg/day*; Antiplaque; Antiprolactin; Antiprostatitic *50 mg/man/day/orl*; Antirheumatic; Antispare-Tire *30 mg/day*; Antistomatitic *50 mg/man/3x/day*; Antisyndrome-X *30 mg/day*; Antitinnitic *60-120 mg/day*; Antitriglyceride *30 mg/day*; Antiulcer *50 mg/3x/day/man 88 mg/rat/day/15 days*; Antiviral?; Astringent; Copper-Antagonist; Deodorant; Hypotensive *30 mg/day*; Immunostimulant; Immunosuppressant *300 mg/day/6 wks/orl/man*; Insulinogenic *30 mg/day*; Leptingenic *30-60 mg/man/day*; Mucogenic; Pesticide; Spermigenic *60 mg/day*; Testosteronigenic; Trichomonicide; Vulnerary

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ppm = parts per million
tr = trace

Phytochemical Database, USDA - ARS - NGRL, Beltsville Agricultural Research Center, Beltsville, Maryland
Wed Oct 27 13:56:49 EDT 2004

Please send questions and comments to:

James A. Duke

Jim Duke
Green Farmacy Garden
8210 Murphy Road
Fulton, MD 20759

or

Mary Jo Bogenschutz *(E-Mail: bogie@hawaii.rr.com)*

Please send technical questions and comments to:

WebMaster *(E-Mail: dbmuqs@ars-grin.gov)*

The USDA does not recommend self diagnosis or self medication. Please see the disclaimer for more information.

Agricultural Research Service

Phytochemical and Ethnobotanical Databases

Opuntia ficus-indica (L.) MILL. - Cactaceae

Activities

The number in () indicates how many separate chemicals this species has for that activity, for example, ***Analgesic (3)*** indicates this species has three separate chemicals that have Analgesic activity. Select the activity to see the chemicals.

11B-HSD-Inhibitor (1)
5-Alpha-Reductase-Inhibitor (4)
5-HETE-Inhibitor (1)
5-Lipoxygenase-Inhibitor (1)
ACE-Inhibitor (2)
Acaricide (1)
Acetylcholinergic (1)
Acidifier (1)
Acidulant (1)
Additive (2)
Adrenergic (1)
Aggregant (1)
Aldose-Reductase-Inhibitor (5)
Allelochemic (1)
Allergenic (6)
Alpha-Amylase-Inhibitor (1)
Alpha-Reductase-Inhibitor (1)
Analgesic (5)
Androgenic (1)
Androgenic? (1)
Anemiagenic (1)
Angiotensin-Receptor-Blocker (3)
Anorexic (1)
AntiADD (1)
AntiAGE (1)
AntiAddisonian (1)
AntiCVI (1)
AntiCrohn's (2)
AntiHIV (1)
AntiMD (1)
AntiMS (2)
AntiMeniere's (2)

AntiPMS (4)
Antiacid (1)
Antiacne (3)
Antiacrodermatitic (1)
Antiacrodynic (1)
Antiadenomic (1)
Antiaflatoxin (1)
Antiaggregant (5)
Antiaging (3)
Antiakathisic (1)
Antialcoholic (2)
Antialdosteronic (1)
Antialkali? (1)
Antialkalotic (1)
Antiallergic (5)
Antialopecic (4)
Antialzheimeran (3)
Antiamblyopic (1)
Antianaphylactic (1)
Antiandrogenic (4)
Antianemic (1)
Antianginal (3)
Antianorectic (2)
Antianorexic (1)
Antianxiety (3)
Antiaphthic (1)
Antiapoplectic (1)
Antiarabiflavinotic (1)
Antiarrhythmic (3)
Antiarteriosclerotic (2)
Antiarthritic (4)
Antiarthritic? (1)
Antiasthmatic (3)
Antiatherogenic (2)
Antiatheromic (1)
Antiatherosclerotic (6)
Antibackache (1)
Antibacterial (11)
Antiberiberi (1)
Antibiotic (1)
Antibronchitic (1)
Anticalculic (1)
Anticancer (4)
Anticancer (Breast) (2)
Anticanker (1)
Anticapillary-Fragility (1)
Anticarcinogenic (1)
Anticarcinomic (2)
Anticardiospasmic (1)
Anticariogenic (1)
Anticarpal-Tunnel (1)

Anticataract (9)
Anticheilitic (2)
Antichilblain (2)
Antichorea (1)
Antichoreic (1)
Anticlastogen (1)
Anticoagulant (1)
Anticoeliac (1)
Anticold (2)
Anticolitic (2)
Anticomplementary (1)
Anticonvulsant (4)
Anticoronary (5)
Anticytotoxic (1)
Antidandruff (1)
Antidecubitic (4)
Antideliriant (1)
Antidementia (2)
Antidepressant (6)
Antidepressant? (1)
Antidermatic (1)
Antidermatitic (3)
Antidiabetic (10)
Antidiabetic? (1)
Antidiarrheic (1)
Antidote (Acetaminophen) (1)
Antidote (Aluminum) (2)
Antidote (Cadmium) (2)
Antidote (Hypoglycin-A) (1)
Antidote (Lead) (2)
Antidote (Paracetamol) (1)
Antidote (Paraquat) (1)
Antidyskinetic (1)
Antidysmenorrheic (2)
Antidysphagic (1)
Antieczemic (4)
Antiedemic (5)
Antiencephalitic (1)
Antiencephalopathic (7)
Antiencephalopathic? (1)
Antiepileptic (4)
Antiepitheleomic (1)
Antierythemic (1)
Antiestrogenic (2)
Antifatigue (2)
Antifeedant (5)
Antifertility (2)
Antifibrinolytic (2)
Antifibrositic (1)
Antiflu (1)
Antifuruncular (1)

Antigastritic (2)
Antigingivitic (2)
Antiglaucomic (3)
Antiglossitic (1)
Antigonadotrophic (1)
Antigranular (1)
Antihangover (1)
Antiheartburn (1)
Antihematuric (1)
Antihemorrhagic (2)
Antihemorrhoidal (1)
Antihepatitic (2)
Antihepatotic (1)
Antihepatotoxic (5)
Antiherpetic (8)
Antiherpetic? (1)
Antihiccup (1)
Antihistaminic (7)
Antihyperactivity (1)
Antihyperammonemic (1)
Antihyperkeratotic (1)
Antihyperkinetic (2)
Antihyperlipoproteinaemic (1)
Antihypertensive (8)
Antihypoglycemic (1)
Antiichythyotic (1)
Antiimplantation (1)
Antiimpotence (2)
Antiinfective (1)
Antiinfertility (3)
Antiinflammatory (13)
Antiinsomniac (4)
Antiinsomnic (1)
Antiischemic (1)
Antikeratitic (1)
Antiketotic (2)
Antilepric (2)
Antileukemic (4)
Antileukonychic (1)
Antileukoplakic (1)
Antileukotriene (1)
Antileukotriene-D4 (2)
Antilithic (3)
Antilupus (2)
Antilymphocytic (1)
Antilymphomic (2)
Antimalarial (1)
Antimanic (1)
Antimastalgic (2)
Antimastitic (1)
Antimeasles (1)

Antimelanomic (1)
Antimenopausal (1)
Antimenorrhagic (2)
Antimigraine (6)
Antimorphinic (1)
Antimutagenic (9)
Antimyocarditic (1)
Antimyoclonic (1)
Antinauseant (1)
Antinephritic (1)
Antineuralgic (2)
Antineurasthenic (1)
Antineuritic (2)
Antineuropathic (1)
Antineurotic (1)
Antinitrosaminic (1)
Antinitrosic (1)
Antinociceptive (4)
Antiobesity (4)
Antiophidic (2)
Antiophthalmic (3)
Antiorchitic (1)
Antiosteoarthritic (2)
Antiosteoporotic (4)
Antioxidant (22)
Antioxidant Synergist (3)
Antioxidant? (2)
Antiozenic (1)
Antiparkinsonian (7)
Antiparotitic (1)
Antipellagric (3)
Antiperiodontic (1)
Antiperiodontitic (2)
Antiperoxidant (1)
Antiphenylketonuric (2)
Antiphotophobic (2)
Antipityriasic (1)
Antiplaque (2)
Antiplatelet (1)
Antipneumonic (1)
Antipodriac (1)
Antipolio (2)
Antipoliomyelitic (2)
Antiporphyric (1)
Antiprogestational (1)
Antiprolactin (1)
Antiproliferant (3)
Antiprostaglandin (2)
Antiprostatadenomic (1)
Antiprostatitic (5)
Antiprotozoal (1)

Antipruritic (1)
Antipsoriac (1)
Antipsychotic (1)
Antipurpuric (2)
Antipyretic (2)
Antiradicular (6)
Antiretardation (1)
Antiretinopathic (1)
Antiretinopathic? (1)
Antirheumatic (2)
Antirhinoviral (1)
Antiscoliotic (1)
Antiscorbutic (1)
Antiscotomic (1)
Antiseborrheic (2)
Antisenility (1)
Antiseptic (5)
Antiserotonin (1)
Antishingles (1)
Antisickling (3)
Antispare-Tire (1)
Antispasmodic (9)
Antispasmophilic (1)
Antistaphylococcic (2)
Antisterility (1)
Antistomatitic (1)
Antistress (1)
Antistroke (2)
Antisunburn (2)
Antisyndrome-X (4)
Antithalassemic (1)
Antithrombogenic (2)
Antithrombotic (1)
Antithromboxane-B2 (1)
Antitic (1)
Antitinnitic (1)
Antitoxemic (1)
Antitriglyceride (1)
Antitrypanosomic (1)
Antitubercular (2)
Antitumor (11)
Antitumor (Breast) (2)
Antitumor (Cervix) (1)
Antitumor (Colon) (2)
Antitumor (Colorectal) (1)
Antitumor (Kidney) (1)
Antitumor (Lung) (3)
Antitumor (Ovary) (1)
Antitumor (Pancreas) (1)
Antitumor (Prostate) (1)
Antitumor (Skin) (1)

Antitumor (Stomach) (1)
Antitumor (Thyroid) (1)
Antitumor (brain) (1)
Antitumor-Promoter (3)
Antitussive (2)
Antiulcer (12)
Antiulcerogenic (1)
Antivaricose (2)
Antivertigo (1)
Antiviral (9)
Antiviral? (1)
Antivitiligic (1)
Antixerophthalmic (1)
Anxiolytic (1)
Aphidifuge (1)
Aphrodisiac (1)
Apoptotic (4)
Aromatase-Inhibitor (2)
Artemicide (2)
Asthma-preventive (1)
Astringent (1)
Atherogenic (1)
Bacteristat (1)
Beta-Adrenergic Receptor Blocker (1)
Beta-Blocker (2)
Beta-Glucuronidase-Inhibitor (2)
Bronchoconstrictor (1)
Bronchostimulant (1)
Bruchifuge (1)
Bruchiphobe (2)
CNS-Active (1)
CNS-Depressant (3)
CNS-Paralytic (1)
COX-1-Inhibitor (1)
COX-2-Inhibitor (2)
Calcium-Antagonist (3)
Calcium-Channel-Blocker (1)
Cancer-Preventive (27)
Candidicide (2)
Capillariprotective (1)
Carcinogenic (4)
Cardioprotective (1)
Cardiotonic (1)
Cardiotoxic (1)
Cardiovascular (3)
Catabolic (1)
Cerebroprotective (1)
Chemopreventive (2)
Choleretic (5)
Circulatory-Stimulant (1)
Cold-preventive (1)

Collagenic (1)
Collyrium (1)
Colorant (1)
Comedolytic (1)
Contraceptive (1)
Copper-Antagonist (1)
Copper-Chelator (1)
Cosmetic (2)
Cyclooxygenase-Activator (1)
Cyclooxygenase-Inhibitor (1)
Cytotoxic (2)
Deiodinase-Inhibitor (1)
Demulcent (3)
Deodorant (1)
Dermatitigenic (1)
Detoxicant (3)
Diagnostic (1)
Diaphoretic? (1)
Differentiator (1)
Disinfectant (1)
Diuretic (9)
Dye (3)
Emetic (2)
Essential (7)
Estrogenic (4)
Estrogenic? (1)
FLavor (7)
Fatal (1)
Febrifuge (1)
Fistula-Preventive (1)
Flatugenic (1)
Fungicide (1)
Gastrostimulant (1)
Glutathionergic (1)
Glutathionigenic (1)
Gonadotrophic (1)
HIV-RT-Inhibitor (1)
Hallucinogen (1)
Heme-Sparing (1)
Hemolytic (1)
Hemopoietic (1)
Hemostat (5)
Hemostatic (1)
Hepatomagenic (1)
Hepatoprotective (9)
Hepatotonic (1)
Histaminic (1)
Hyaluronidase-Inhibitor (1)
Hypercholesterolemic (4)
Hyperglycemic (1)
Hypertensive (2)

Hypnotic (1)
Hypoammonemic (1)
Hypoarginanemic (1)
Hypocholesterolemic (14)
Hypoglycemic (7)
Hypolipidemic (2)
Hypotensive (10)
Hypouricemic (1)
Ileorelaxant (1)
Immunomodulator (2)
Immunostimulant (5)
Immunosuppressant (1)
Inflammatory (1)
Inotropic (1)
Insecticide (1)
Insectifuge (4)
Insectiphile (2)
Insulin-Sparing (1)
Insulinase-Inhibitor (1)
Insulinogenic (2)
Insulinotonic (1)
Interferon-Synergist (1)
Interferonogenic (1)
Iodothyronine-Deiodinase-Inhibitor (2)
Irritant (6)
Juvabional (1)
Larvistat (1)
Laxative (3)
Laxative? (2)
Leptingenic (1)
Lipotropic (1)
Lipoxygenase-Inhibitor (5)
Lithogenic (2)
Litholytic (1)
Lubricant (3)
MAO-A-Inhibitor (1)
MAO-Inhibitor (3)
MMP-9-Inhibitor (1)
Memory-Enhancer (1)
Metalloproteinase-Inhibitor (1)
Metastatic (1)
Monoamine-Precursor (3)
Mucogenic (2)
Mucolytic (1)
Mutagenic (3)
Mycobactericide (2)
Myoprotective (1)
Myorelaxant (3)
Myostimulant (1)
NEP-Inhibitor (1)
NO-Genic (1)

Natriuretic (1)
Nematicide (3)
Neoplastic (1)
Neuroexcitant (1)
Neuroinhibitor (1)
Neuroprotective (1)
Neurotoxic (3)
Odontolytic (1)
Ophthalmic-Antialkali (1)
Ornithine-Decarboxylase-Inhibitor (1)
Osteogenic (1)
Oviposition-Stimulant (1)
Ovulant (1)
Oxidant (1)
P21-Inducer (1)
PAF-Inhibitor (1)
PTK-Inhibitor (1)
Paralytic (1)
Percutaneostimulant (1)
Perfumery (3)
Peristaltic (1)
Pesticide (18)
Phagocytotic (1)
Phospholipase-A2-Inhibitor (1)
Pigment (3)
Pituitary-Stimulant (1)
Preservative (1)
Prolactinogenic (1)
Proliferant (1)
Prooxidant (1)
Propecic (4)
Prostaglandin-Synthetase-Inhibitor (1)
Protein-Kinase-C-Inhibitor (2)
Protisticide (2)
Psychoactive (1)
Psychotomimetic (1)
Quinone-Reductase-Inducer (2)
Radioprotective (2)
Refrigerant (1)
Renotoxic (1)
Roborant (1)
Schizophrenigenic (1)
Secretogogue (1)
Sedative (3)
Sequestrant (1)
Serotoninergic (2)
Sialogogue (1)
Soap (1)
Spasmogenic (1)
Spermicide (1)
Spermigenic (2)

Succinoxidase-Inhibitor (1)
Sunscreen (1)
Suppository (1)
Sweetener (3)
Sympathomimetic (2)
Tachycardic (1)
Teratogenic (1)
Teratologic (1)
Testosteronigenic (1)
Thymoprotective (1)
Topoisomerase-I-Inhibitor (2)
Topoisomerase-II-Inhibitor (2)
Tremorigenic (2)
Trichomonicide (1)
Triglycerigenic (1)
Tumor-Promoter (1)
Tyrosinase-Inhibitor (1)
Ubiquiot (2)
Ulcerogenic (2)
Uricogenic (1)
Uricosuric (2)
Urinary-Acidulant (1)
Urine-Acidifier (1)
Urine-Deodorant (1)
Uterorelaxant (1)
Uterotrophic (1)
Varroacide (1)
Vasoconstrictor (1)
Vasodilator (13)
Vasopressor (3)
Vulnerary (3)
Xanthine-Oxidase-Inhibitor (1)
cAMP-Phosphodiesterase-Inhibitor (2)

WARNING and DISCLAIMER

Please send farmacy comments to Jim Duke at:

Jim Duke
Green Farmacy Garden
8210 Murphy Road
Fulton, MD 20759

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[Production Version]

Opuntia ficus-indica (L.) MILL. - Cactaceae

Chemicals with Cancer-Preventive Activity:

ALANINE
ASCORBIC-ACID
BETA-CAROTENE
BETA-SITOSTEROL
CYSTEINE
FIBER
GLYCINE
ISORHAMNETIN
KAEMPFEROL
LINOLEIC-ACID
LUTEOLIN
METHIONINE
MUCILAGE
MYRISTIC-ACID
N-METHYL-TYRAMINE
NIACIN
OLEIC-ACID
PECTIN
QUERCITRIN
RIBOFLAVIN
RUTIN
SERINE
SHIKIMIC-ACID
STIGMASTEROL
SUCCINIC-ACID
TOCOPHEROL
TYROSINE

Exit

Opuntia ficus-indica (L.) MILL. - Cactaceae

Chemicals with Choleretic Activity:

KAEMPFEROL
LUTEOLIN
OLEIC-ACID
QUERCITRIN
QUINIC-ACID

Exit

Opuntia ficus-indica (L.) MILL. - Cactaceae

Chemicals with Diuretic Activity:

ARGININE
ASCORBIC-ACID
CALCIUM
FIBER
KAEMPFEROL
LUTEOLIN
MAGNESIUM
POTASSIUM
QUERCITRIN

Exit

Opuntia ficus-indica (L.) MILL. - Cactaceae

Chemicals with Glutathionergic Activity:

CYSTEINE

Exit

Opuntia ficus-indica (L.) MILL. - Cactaceae

Chemicals with Glutathionigenic Activity:

METHIONINE

Exit

Opuntia ficus-indica (L.) MILL. - Cactaceae

Chemicals with Hepatoprotective Activity:

BETA-SITOSTEROL
ISORHAMNETIN
KAEMPFEROL
LINOLEIC-ACID
LUTEOLIN
METHIONINE
NIACIN
RUTIN
TOCOPHEROL

Exit

Opuntia ficus-indica (L.) MILL. - Cactaceae

Chemicals with Hypercholesterolemic Activity:

LAURIC-ACID
MYRISTIC-ACID
PALMITIC-ACID
SUCROSE

Exit

Opuntia ficus-indica (L.) MILL. - Cactaceae

Chemicals with Hypoglycemic Activity:

ASCORBIC-ACID
BETA-SITOSTEROL
NIACIN
PECTIN
QUERCITRIN
TOCOPHEROL
TRYPTOPHAN

Exit

Opuntia ficus-indica (L.) MILL. - Cactaceae

Chemicals with Hypotensive Activity:

ASCORBIC-ACID
CALCIUM
FIBER
HISTAMINE
KAEMPFEROL
MAGNESIUM
QUERCITRIN
RUTIN
TRYPTOPHAN
ZINC

Exit

Opuntia ficus-indica (L.) MILL. - Cactaceae

Chemicals with Insulinogenic Activity:

MAGNESIUM
ZINC

Exit

Opuntia ficus-indica (L.) MILL. - Cactaceae

Chemicals with Insulinotonic Activity:

TRYPTOPHAN

Exit

Opuntia ficus-indica (L.) MILL. - Cactaceae

Chemicals with Vasodilator Activity:

ARGININE
ASCORBIC-ACID
CALCIUM
FIBER
HISTAMINE
ISORHAMNETIN
KAEMPFEROL
LUTEOLIN
MAGNESIUM
NIACIN
POTASSIUM
RUTIN
TOCOPHEROL

Exit

Opuntia ficus-indica (L.) MILL. - Cactaceae

Chemicals with Aldose-Reductase-Inhibitor Activity:

ASCORBIC-ACID
KAEMPFEROL
LUTEOLIN
QUERCITRIN
RUTIN

Exit

Opuntia ficus-indica (L.) MILL. - Cactaceae

Chemicals with Angiotensin-Receptor-Blocker Activity:

ASCORBIC-ACID
FIBER
POTASSIUM

Exit

Opuntia ficus-indica (L.) MILL. - Cactaceae

Chemicals with Antiaging Activity:

ASCORBIC-ACID
BETA-CAROTENE
TOCOPHEROL

Exit

Opuntia ficus-indica (L.) MILL. - Cactaceae

Chemicals with Antialdosteronic Activity:

GLYCINE

Exit

Opuntia ficus-indica (L.) MILL. - Cactaceae

Chemicals with Antiatherosclerotic Activity:

ASCORBIC-ACID
CALCIUM
CITRIC-ACID
MAGNESIUM
MALIC-ACID
TOCOPHEROL

Exit

Opuntia ficus-indica (L.) MILL. - Cactaceae

Chemicals with Antidiabetic Activity:

ASCORBIC-ACID
COPPER
FIBER
FRUCTOSE
MAGNESIUM
PECTIN
RUTIN
TOCOPHEROL
XYLOSE
ZINC

Exit

Opuntia ficus-indica (L.) MILL. - Cactaceae

Chemicals with Antihypertensive Activity:

ARGININE
ASCORBIC-ACID
CALCIUM
FIBER
MAGNESIUM
POTASSIUM
RUTIN
TRYPTOPHAN

Exit

Opuntia ficus-indica (L.) MILL. - Cactaceae

Chemicals with Antiobesity Activity:

ASCORBIC-ACID
FIBER
PECTIN
ZINC

Exit

Opuntia ficus-indica (L.) MILL. - Cactaceae

Chemicals with Antioxidant Activity:

ALANINE
ASCORBIC-ACID
BETA-CAROTENE
BETA-SITOSTEROL
BETANIN
CAMPESTEROL
CHOLESTEROL
CYSTEINE
ISORHAMNETIN
KAEMPFEROL
LAURIC-ACID
LUTEOLIN
METHIONINE
MYRISTIC-ACID
PALMITIC-ACID
QUERCITRIN
RUTIN
SHIKIMIC-ACID
STIGMASTEROL
SUCROSE
TOCOPHEROL
TRYPTOPHAN

Exit

Opuntia ficus-indica (L.) MILL. - Cactaceae

Chemicals with Antioxidant Synergist Activity:

CITRIC-ACID
MALIC-ACID
TARTARIC-ACID

Exit

Opuntia ficus-indica (L.) MILL. - Cactaceae

Chemicals with Antisyndrome-X Activity:

ASCORBIC-ACID
MAGNESIUM
TOCOPHEROL
ZINC

Exit

1: Am J Clin Nutr. 2004 Aug;80(2):391-5.

Supplementation with cactus pear (Opuntia ficus-indica) fruit decreases oxidative stress in healthy humans: a comparative study with vitamin C.

Tesoriere L, Butera D, Pintaudi AM, Allegra M, Livrea MA.

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BACKGROUND: Cactus pear (Opuntia ficus-indica) fruit contains vitamin C and characteristic betalain pigments, the radical-scavenging properties and antioxidant activities of which have been shown in vitro. OBJECTIVE: We investigated the effects of short-term supplementation with cactus pear fruit compared with vitamin C alone on total-body oxidative status in healthy humans. DESIGN: In a randomized, crossover, double-treatment study, 18 healthy volunteers received either 250 g fresh fruit pulp or 75 mg vitamin C twice daily for 2 wk, with a 6-wk washout period between the treatments. Before (baseline) and after each treatment, 8-epi-prostaglandin F(2alpha) (8-epi-PGF(2alpha)) and malondialdehyde in plasma, the ratio of reduced to oxidized glutathione (GSH:GSSG) in erythrocytes, and lipid hydroperoxides in LDL were measured as biomarkers of oxidative stress; plasma Trolox-equivalent antioxidant activity (TEAC) and vitamins A, E, and C were evaluated as indexes of antioxidant status. RESULTS: Both treatments caused comparable increases compared with baseline in plasma concentrations of vitamin E and vitamin C ($P < 0.05$); vitamin A and TEAC did not change significantly. After supplementation with cactus pear fruit, 8-epi-PGF(2)alpha and malondialdehyde decreased by approximately 30% and 75%, respectively; GSH:GSSG shifted toward a higher value ($P < 0.05$); and LDL hydroperoxides were reduced by almost one-half. Supplementation with vitamin C did not significantly affect any marker of oxidative stress. CONCLUSIONS: Consumption of cactus pear fruit positively affects the body's redox balance, decreases oxidative damage to lipids, and improves antioxidant status in healthy humans. Supplementation with vitamin C at a comparable dosage enhances overall antioxidant defense but does not significantly affect body oxidative stress. Components of cactus pear fruit other than antioxidant vitamins may play a role in the observed effects.

Publication Types:
Clinical Trial
Randomized Controlled Trial

PMID: 15277160 [PubMed - indexed for MEDLINE]

1: Mol Cell Biochem. 2004 May;260(1-2):103-10.

Modulation of intracellular calcium concentrations and T cell activation by prickly pear polyphenols.

Aires V, Adote S, Hichami A, Moutairou K, Boustani ES, Khan NA.

UPRES Lipides and Nutrition, Universite de Bourgogne, Faculte des Sciences de la vie 6, Dijon, France.

Opuntia ficus indica (prickly pear) polyphenolic compounds (OFPC) triggered an increase in [Ca2+]i in human Jurkat T-cell lines. Furthermore, OFPC-induced rise in [Ca2+]i was significantly curtailed in calcium-free buffer (0% Ca2+) as compared to that in 100% Ca2+ medium. Preincubation of cells with tyrphostin A9, an inhibitor of Ca2+ release-activated Ca2+ (CRAC) channels, significantly diminished the OFPC-induced sustained response on the increases in [Ca2+]i. Lanthanum and nifedipine, the respective inhibitors of voltage-dependent and L-type calcium channels, failed to curtail significantly the OFPC-induced calcium response. As OFPC still stimulated increases in [Ca2+]i in 0% Ca2+ medium, the role of intracellular calcium was investigated. Hence, addition of thapsigargin (TG), an inhibitor of Ca2+-ATPase of the endoplasmic reticulum (ER), during the OFPC-induced peak response exerted an additive effect, indicating that the mechanism of action of these two agents are different. Furthermore, U73122, an inhibitor of IP3 production, completely abolished increases in [Ca2+]i, induced by OFPC, suggesting that these polyphenols induce the production of IP3 that recruits calcium from ER pool. Polyphenolic compounds do act extracellularly as addition of fatty acid-free bovine serum albumin (BSA) significantly diminished the rise in [Ca2+]i evoked by the formers. OFPC also induced plasma membrane hyperpolarisation which was reversed by addition of BSA. OFPC were found to curtail the expression of IL-2 mRNA and T-cell blastogenesis. Together these results suggest that OFPC induce increases in [Ca2+]i via ER pool and opening of CRAC channels, and exert immunosuppressive effects in Jurkat T-cells.

PMID: 15228091 [PubMed - indexed for MEDLINE]

1: Arch Invest Med (Mex). 1991 Jul-Dec;22(3-4):333-6.

The effect of two sequential doses of Opuntia streptacantha upon glycemia.

Frati AC, Xilotl Diaz N, Altamirano P, Ariza R, Lopez-Ledesma R.

Departament of Internal Medicine, Hospital de Especialidades CMR, Mexico, D.F.

To find out if a second dose of O. streptacantha may enhance its hypoglycemic effect, three tests were performed in fasting condition to 8 type II diabetic subjects and 6 healthy individuals. The tests were as follows: A. 500 g of broiled stems of O. streptacantha were given orally initially and two hours later. B. Only the initial dose. C. Control test with water. Serum glucose and C peptide were measured every two hours from 0 to 6 hours. In diabetic patients a significant ($P < 0.01$ vs control) decrease of serum glucose reaching from 41 to 46% less than initial value, was noticed in tests A and B, without differences between them. C peptide did not change. In healthy subjects serum glucose and C peptide did not significantly differ between tests. A second dose of O. streptacantha, two hours after the first one, did not improve its hypoglycemic activity.

PMID: 1844121 [PubMed - indexed for MEDLINE]

1: Arch Invest Med (Mex). 1990 Apr-Jun;21(2):99-102.

[Activity of Opuntia streptacantha in healthy individuals with induced hyperglycemia]

[Article in Spanish]

Frati-Munari AC, Licona-Quesada R, Araiza-Andraca CR, Lopez-Ledesma R, Chavez-Negrete A.

Departamento de medicina Interna, Hospital de Especialidades, Centro Medico La Raza, Mexico, D.F.

Hypoglycemia effect Opuntia streptacantha which occur in diabetic has not been found in healthy subjects. To find out if this effect appears also in healthy individuals if they are hyperglycemic, two tests were performed to 7 healthy volunteers. In both tests 500 ml of 20% dextrose were infused in two hours, 500 g of O. streptacantha were given orally before one test, and 400 ml of water as control were given before the other one. Serum glucose was measured every 30 minutes during three hours. Glucose rising was significantly (P less than 0.025) lower with Opuntia than in control test at 90 and 120 minutes (143 +/- 58 vs 193 +/- 9 and 135 +/- 25 vs 163 +/- 13 mg/dl respectively). Area under curve of glucose was also smaller in Opuntia than in control test (P less than 0.05). Hypoglycemic effect of O. streptacantha also occur in healthy subjects in hyperglycemia is present.

PMID: 2103713 [PubMed - indexed for MEDLINE]

1: Arch Invest Med (Mex). 1989 Apr-Jun;20(2):197-201.

[Hypoglycemic action of different doses of nopal (Opuntia streptacantha Lemaire) in patients with type II diabetes mellitus]

[Article in Spanish]

Frati-Munari AC, Del Valle-Martinez LM, Ariza-Andraca CR, Islas-Andrade S, Chavez-Negrete A.

To assess the relationship between the doses of O. streptacantha Lem. and its acute hypoglycemic action in diabetics, eight patients with type II diabetes mellitus were studied. Four test were performed to each patient with the intake of: (a) 400 ml of water, (b) 100 g (c) 300 g and (d) 500 g of broiled stems of O. streptacantha Lem. Serum glucose was measured at 0, 60, 120 and 180 minutes. Maximal decrease of serum glucose was noticed at 180 minutes, with a mean of 2.3, 10, 30.1 and 46.7 mg/dl less than basal value with 0, 100, 300 and 500 g respectively (P = NS, less than 0.05, less than 0.001 and less than 0.001 respectively). A significant direct correlation (r = 0.690, P less than 0.001) was noticed between the doses and the hypoglycemic effect.

PMID: 2557805 [PubMed - indexed for MEDLINE]