

# Dr. Duke's Phytochemical and Ethnobotanical Databases



## Chemicals and their Biological Activities in: *Eucalyptus globulus* LABILL. (Myrtaceae) -- Blue Gum, Eucalypt, Tasmanian Bluegum

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### Chemicals

#### **1,8-CINEOLE** *Leaf* 3,500 - 29,750 ppm

(-)-Chronotropic 87 nl/ml; (-)-Inotropic; Acaricide  $LC_{100}=6\ \mu M$ ; Allelopathic; Allergenic; Anesthetic; Anthelmintic; Antiacetylcholinesterase  $IC_{50}=41\ \mu g/ml$ ; Antiallergic; Antibacterial 50 ppm; Antibronchitic; Anticariogenic; Anticatarrh; Anticholinesterase  $IC_{50}=50-70$ ; Antifatigue; Antihalitosis; Antiinflammatory; Antilaryngitic; Antinociceptive; Antipharyngitic; Antiplatelet; Antirheumatic; Antirhinitic; Antiseptic; Antisinusitic; Antispasmodic; Antistaphylococcal 50 ppm; Antitussive; Antiulcer; Candidicide; Carcinogenic; Choleric; CNS-Stimulant; Convulsant; Counterirritant; Cytochrome-P450-Inducer; Decongestant; Degranulant 0.3 ul/ml; Dentifrice; Edemagenic inj; Expectorant; FLavor FEMA 1-200; Fungicide; Gastroprotective; Gram(+)-icide; Gram(-)-icide; Hepatotonic; Herbicide  $IC_{50}=78\ \mu M$ ; Hypotensive; Inflammatory inj; Insectifuge; Irritant; Myorelaxant; Nematicide; Neurotoxic; P450-Inducer; Pediculicide 2.3 x pyrethrin; Perfume; Pesticide; Rubefacient; Secretagogue; Sedative; Spasmodic; Surfactant; Testosterone-Hydroxylase-Inducer; Transdermal; Trichomonocidal  $LD_{100}=1,000\ \mu g/ml$

#### **11,12-DEHYDROURSOLACTONE-ACETATE** *Leaf Wax*:

No activity reported.

#### **3-ISOPROPYLIDEN-1-ACETYL-5-CYCLOPENTENE** *Leaf*:

No activity reported.

#### **3-OMETHYLELLAGIC-ACID-4'-RHAMNOSIDE** *Bark: Wood*:

No activity reported.

#### **ALLO-AROMADENDRINE** *Plant*:

No activity reported.

#### **ALPHA-AROMADENDRENE** *Leaf*:

No activity reported.

#### **ALPHA-EUDESOL** *Plant*:

No activity reported.

**ALPHA-PHELLANDRENE Leaf:**

Antibacterial; Antistaphylococcic; Dermal; Emetic; FLavor *FEMA 10-130*; Fungicide; Insectiphile; Irritant; Laxative; Perfumery; Pesticide

**ALPHA-PINENE Leaf:**

Allelochemic; Allergenic; Antiacne; Antibacterial; Antifeedant; Antiflu; Antiinflammatory *500 mg/kg*; Antipneumonic; Antiseptic; Antispasmodic; Antistaphylococcic; Antiviral; Cancer-Preventive; Coleoptophile; Expectorant; FLavor *FEMA 15-150*; Herbicide *IC50=30 uM*; Insecticide *0.82 uM/fly*; Insectifuge *50 ppm*; Insectiphile; Irritant; P450-2B1-Inhibitor *IC50=0.087 uM*; Perfumery; Pesticide; Sedative; Spasmogenic; Tranquilizer; Transdermal

**AROMADENDRENE Leaf 50 - 350 ppm**

Antiseptic; Cancer-Preventive; Pesticide

**BETA-DIKETONE Leaf Wax:**

No activity reported.

**BETA-EUDESOL Plant:**

Antianoxic *ED60=300 orl mus*; AntiEBV; Antimutagenic *ID50=0.09 uM/ml*; Antipeptic; Antisalmonella *>0.18 uM/ml*; Antitumor-Promoter?; Antiulcer; Calcium-Antagonist *40 uM mus*; CNS-Inhibitor; Hepatoprotective; Neurogenic; Pesticide; Sedative

**BETA-PINENE Leaf:**

Allergenic; Antiinflammatory; Antiseptic; Antispasmodic; Candidicide; FLavor *FEMA 15-600*; Herbicide; Insectifuge; Irritant; Perfumery; Pesticide; Spasmogenic; Transdermal

**BUTYRALDEHYDE Leaf:**

Irritant; Narcotic

**CAFFEIC-ACID Leaf:**

Aldose-Reductase-Inhibitor *4 ug/ml (weak activity)*; Allergenic; Analgesic; Antiadenoviral; Antiaggregant; Antiaging; Antiatherogenic; Antibacterial; Anticancer; Anticarcinogenic; Antidepressant; Antiedemic; Antielastase *IC50=86 ug/ml (475 uM)* *IC50=93 um/l*; Antiescherichic; Antiflu; Antigonadotropic; Antihemolytic *25 uM*; Antihepatoadenomic *200 ppm diet orl mus*; Antihepatotoxic; Antiherpetic *50 ug/ml EC50=>50 ug/ml*; Antihistaminic; AntiHIV *EC50=200 ug/ml*; Antihypercholesterolemic; Antihyperthyroid; Antiinflammatory; AntiLegionella; Antileukemic; Antileukotriene; Antimelanogenic; Antimutagenic; Antinitrosaminic; Antiophidic; Antioxidant *1.3 x Vit. E 1/2 BHA 1/3 quercetin 30 mM 50 uM IC57=30 ppm*; Antiperoxidant *IC35=200 ug/ml IC50=44 uM IC85=100 ug/ml*; Antiproliferant; Antiprostaglandin; Antiradicular *1/3 quercetin 10 uM 30 mM IC50=32-35 uM*; Antiseptic; Antispasmodic *EC50=3.4-15 uM*; Antistaphylococcic; Antistomatitic; Antisunburn; Antithiamin; Antithyroid; Antitumor *200 ppm diet orl mus*; Antitumor (Skin); Antitumor-Promoter *IC42=10 uM*; Antiulcerogenic; Antivaccinia; Antiviral *IC50=62.5 ug/ml*; Anxiolytic; Calcium-Antagonist *IC50=1.2 uM rbt*; Cancer-Preventive; Carcinogenic *2% (diet)*; Chemopreventive; Cholagogue; Choloretic; Clastogenic; CNS-Active; Co-carcinogenic; Collagen-Sparing; COX-2-Inhibitor *IC32=100 uM*; Cytoprotective; Cytotoxic *TC50=200 ug/ml*; Diuretic; DNA-Active; DNA-Protective; Fungicide *MIC=0.4 mg/ml*; Hepatocarcinogenic *400 ppm diet orl mus*

(in the absence of alcohol); Hepatoprotective; Hepatotropic; Histamine-Inhibitor; Immunostimulant; Insectifuge; Leukotriene-Inhibitor; Lipoxygenase-Inhibitor  $IC_{27}=5\text{ mM}$   $IC_{50}=62-148\text{ }\mu\text{M}$ ; Lyase-Inhibitor  $IC_{50}=94-164\text{ }\mu\text{M}$ ; Metal-Chelator; Ornithine-Decarboxylase-Inhibitor; Pesticide; Prooxidant; Prostaglandigenic; Sedative  $500\text{ mg}$ ; Sunscreen  $IC_{50}=2.5\text{ mg/l}$   $IC_{91}=5\text{ mg/l}$   $IC_{98}=25\text{ mg/l}$ ; Tumorigenic; Vulnerary; Xanthine-Oxidase-Inhibitor  $IC_{50}=39.21\text{ }\mu\text{M}$

**CAMPHENE Leaf:**

Allelopathic; Antilithic?; Antioxidant; Expectorant; FLavor *FEMA 15-175*; Hypocholesterolemic?; Insectifuge; Pesticide; Spasmogenic

**CAPROALDEHYDE Leaf:**

No activity reported.

**CARVONE Leaf:**

Allergenic; Antiacetylcholinesterase  $IC_{50}=1.4-1.8\text{ mM}$ ; Antiproliferative; Antiseptic  $1.5\text{ x phenol}$ ; Cancer-Preventive; Candidostat; Carminative; CNS-Stimulant; FLavor *FEMA 80-3,000*; Fungistat; Insecticide; Insectifuge; Motor-Depressant; Nematicide  $MLC=1\text{ mg/ml}$ ; Perfumery; Pesticide; Sedative; Trichomonicide  $LD_{100}=300\text{ }\mu\text{g/ml}$ ; Vermicide

**CHLOROGENIC-ACID Bark: Wood:**

Aldose-Reductase-Inhibitor  $IC_{50}=1.8\text{ }\mu\text{M rat (strong activity)}$ ; Allelochemic; Allergenic; Analgesic; Antiatherosclerotic; Antibacterial; Anticancer (Colon); Anticancer (Forestomach); Anticancer (Liver); Anticancer (Skin); Anticarcinogenic; Antidiabetic; AntiEBV; Antifeedant; Antigenotoxic; Antigonadotropic; Antihemolytic  $10\text{ }\mu\text{M}$ ; Antihepatotoxic; Antihyperthermic; Antihistaminic; AntiHIV; Antihypercholesterolemic; Antihyperthyroid; Antiinflammatory; AntiLegionella; Antileukotriene; Antimelanogenic; Antimutagenic; Antinitrosaminic; Antioxidant  $IC_{50}=54.2\text{ }\mu\text{M}$   $IC_{53}=200\text{ ppm}$   $IC_{80}=12\text{ }\mu\text{M}$ ; Antiperoxidant  $IC_{50}=36\text{ }\mu\text{M}$ ; Antipolio; Antiradicular  $10\text{ }\mu\text{M}$   $9\text{ x quercetin}$ ; Antiseptic; Antisunburn; Antithyroid; Antitumor; Antitumor (Colon); Antitumor (Forestomach); Antitumor (Liver); Antitumor (Skin); Antitumor-Promoter  $IC_{25}=10\text{ }\mu\text{M}$ ; Antiulcer; Antiviral; Autotoxic; Cancer-Preventive; Cardioprotective; Chemopreventive; Cholagogue; Choloretic; Clastogenic; CNS-Active; CNS-Stimulant  $1/6\text{ Caffeine}$ ; Collagen-Sparing; Diuretic; Fungicide; Hepatoprotective; Histamine-Inhibitor; Hypoglycemic; Immunostimulant; Insectifuge; Interferonogenic; Juvabional; Larvostat; Leukotriene-Inhibitor; Lipoxygenase-Inhibitor  $IC_{23}=5\text{ mM}$ ; Metal-Chelator; NO-Genic; Ornithine-Decarboxylase-Inhibitor; Oviposition-Stimulant; Pesticide; Sunscreen; Sweetener; Vulnerary

**CITRIODOROL Plant:**

Antibiotic; Antitubercular; Pesticide

**CUMINALDEHYDE Leaf 25 - 135 ppm**

Antibacterial; FLavor *FEMA <1*; Fungicide; Irritant; Larvicide; Perfumery; Pesticide; Sedative; Tyrosinase-Inhibitor  $ID_{50}=0.05\text{ mM}$ ; Ulcerogenic

**D-CATECHOL Bark: Wood:**

No activity reported.

**D-LINALOL Leaf:**

No activity reported.

**D-MYRTENAL Leaf:**

No activity reported.

**D-MYRTENOL Leaf:**

No activity reported.

**D-VERBENONE Leaf:**

No activity reported.

**ELLAGIC-ACID Leaf: Stem:**

Abortifacient *1.2 mg/kg ivn mus*; ACE-Inhibitor *IC50=5 mM/l*; Aldose-Reductase-Inhibitor *IC50=0.2 uM IC50=0.2 ug/ml (strong activity)*; Antiaflatoxin; Antianaphylactic; Antibacterial *1,250 ug/ml ID50=20 ug/ml*; Anticancer (Cervix); Anticancer (Colon); Anticancer (Esophagus); Anticancer (Mouth); Anticariogenic; Anticataract; Antigingivitic *1,250 ug/ml*; AntiGTF *ID50=20 ug/ml*; AntiHIV *IC90=200 ug/ml*; Antihyperthyroid; Antiinflammatory; Antimalarial *IC50=0.5 uM*; Antimutagenic; Antioxidant *2/3 quercetin >50 x tocopherol IC98=30 ppm*; Antiperiodontic *1,250 ug/ml*; Antiperoxidant *IC50=29 uM*; Antiplaque *1,250 ug/ml*; Antiplasmodial *IC50=0.5 uM*; Antiseptic *1,250 ug/ml*; Antistreptococcic *ID50=20 ug/ml*; Antithyroid; Antitumor; Antiviral; Antiyeast *IC50=10.5 uM*; Apoptotic; Astringent; Cancer-Preventive *3 ppm*; Candida-SAP-Inhibitor *IC50=8.4 uM*; Cytotoxic *4.6 ug/ml*; Deiodinase-Inhibitor; Detoxicant; Glucosyl-Transferase-Inhibitor *ID50=20 ug/ml*; Hemostatic; Hepatoprotective *IC55=30 ug/ml*; HIV-RT-Inhibitor; Juvabional; Pesticide; Quinone-Reductase-Inducer *0.4 g/kg rat*; Sunscreen *0.5%*; Topoisomerase-I-Antagonist; Xanthine-Oxidase-Inhibitor *IC50=3.1 uM*

**EPIGLOBULOL Leaf 28,000 ppm;**

No activity reported.

**EUCALYPTIN Leaf:**

No activity reported.

**EUGLOBAL-IA1 Plant:**

No activity reported.

**EUGLOBAL-IB Plant:**

No activity reported.

**EUGLOBAL-IC Plant:**

No activity reported.

**EUGLOBAL-IIA Plant:**

No activity reported.

**EUGLOBAL-IIB Plant:**

No activity reported.

**EUGLOBAL-IIC Plant:**

No activity reported.

**EUGLOBAL-III Bud 100 ppm; Leaf 10 ppm;**

No activity reported.

**EUGLOBAL-IVB Plant:**

No activity reported.

**EUGLOBAL-VII Plant:**

No activity reported.

**EUGLOBOL-IA2 Plant:**

No activity reported.

**FERULIC-ACID Leaf:**

Allelopathic; Analgesic; Antiaggregant; Antiallergic; Antiarrhythmic; Antibacterial; Anticancer (Colon); Anticancer (Forestomach); Anticancer (Liver); Anticancer (Skin); Anticarcinogenic; Antidysmenorrhic; Antiestrogenic; Antihepatotoxic; Antiherpetic; Antiinflammatory; Antileukemic  $IC_{50}=25-56\text{ ug/ml}$ ; Antimitotic; Antimutagenic; Antineoplastic (Stomach); Antinitrosaminic; Antioxidant  $1/2\text{ BHA } 1/3\text{ quercetin } 3,000\text{ uM } EC_{50}=9-15\text{ ug/ml } IC_{51}=200\text{ ppm}$ ; Antiradicular  $EC_{50}=9-15\text{ ug/ml } IC_{50}=116-124\text{ uM}$ ; Antiserotonin; Antispasmodic; Antithrombic; Antitumor; Antitumor (Colon); Antitumor (Forestomach); Antitumor (Liver); Antitumor (Skin); Antitumor-Promoter  $IC_{46}=10\text{ uM}$ ; Antiviral; Arteriodilator; Cancer-Preventive; Candidicide; Cardiac; Cholagogue; Choloretic; Fungicide; Hepatoprotective; Hepatotropic; Herbicide; Hydrocholoretic; Hypolipidemic; Immunostimulant; Insectifuge; Metal-Chelator; Ornithine-Decarboxylase-Inhibitor; Pesticide; Phagocytotic; Preservative; Prostaglandigenic; Prostaglandin-Synthesis-Inhibitor  $0.58-3.2\text{ mM}$ ; Sunscreen; Uterosedative  $30-100\text{ mg/kg ivn rat}$

**GALLIC-ACID Bark: Leaf: Stem:**

ACE-Inhibitor  $IC_{50}=7.7\text{ mM/l}$ ; Analgesic; Antiadenovirus; Antiallergenic; Antianaphylactic; Antiangiogenic; Antiasthmatic; Antibacterial  $MIC=1,000\text{ ug/ml}$ ; Antibronchitic; Anticancer; Anticarcinomic  $ED_{50}=3$ ; Antiescherichic; Antifibrinolytic; Antiflu; Antihepatotoxic; Antiherpetic  $EC_{50}=>10\text{ ug/ml}$ ; AntiHIV; Antiinflammatory; Antileishmanic  $EC_{50}=4.4\text{ ug/ml}$ ; AntiMRSA; Antimutagenic; Antinitrosaminic; Antioxidant  $2/3\text{ BHA } 7\text{ x quercetin } IC_{44}=33\text{ ppm}$ ; Antiperiodontitic  $10\text{ ug/ml}$ ; Antiperoxidant  $IC_{50}=69\text{ uM}$ ; Antipolio; Antiproteolytic  $10\text{ ug/ml}$ ; Antiradicular  $7\text{ x quercetin } IC_{50}=4.9\text{ uM}$ ; Antiseptic; Antistaphylococcic  $MIC=1,000\text{ ug/ml}$ ; Antitumor; Antitumor-Promoter; Antiviral; Apoptotic; Astringent; Bacteristat; Bronchodilator; Cancer-Preventive; Candidicide; Carcinogenic; Choloretic; Cyclooxygenase-Inhibitor; Cytotoxic  $500\text{ uM}$ ; Floral-Inhibitor; Gram(+)icide  $MIC=1,000\text{ ug/ml}$ ; Gram(-)icide; Hemostat; Hepatoprotective; Immunomodulator; Immunostimulant; Immunosuppressant; Insulin-Sparing; Myorelaxant; Nephrotoxic; NO-Inhibitor  $IC_{26}=250\text{ uM}$ ; Pesticide; Styptic; Topoisomerase-I-Inhibitor; Xanthine-Oxidase-Inhibitor  $IC_{50}=24\text{ uM}$

**GAMMA-TERPINENE Leaf:**

Acaricide; ACE-Inhibitor  $100\text{ ug/ml}$  (weak activity); Aldose-Reductase-Inhibitor  $100\text{ ug/ml}$ ; Antiacetylcholinesterase  $IC_{23}=1.2\text{ mM}$ ; Antifeedant; Antioxidant; FLavor  $FEMA\ 1-40$ ; Insectifuge; Irritant; Perfumery; Pesticide

**GENTISIC-ACID Leaf:**

Analgesic; Antibacterial; Antifeedant; Antiinflammatory; Antioxidant  $1/3\text{ BHA}$ ; Antirheumatic; Antiviral; Pesticide

**GLOBULOL Leaf:**

No activity reported.

**HYPEROSIDE Leaf:**

Aldose-Reductase-Inhibitor; Analgesic; Antiaging; Antibacterial *MIC=250-500 ug/ml*; Anticancer; Anticapillary-Fragility; Antidermatitic; Antielastase *IC50=0.15 ug/ml*; Antiflu; Antihepatotoxic; Antiinflammatory *1/4 indomethacin*; Antiischemic; Antinociceptive; Antioxidant *IC50=4.6 uM*; Antiradicular; Antitussive; Antiviral; Antiwrinkle; Calcium-Antagonist; cAMP-Inhibitor *IC50=0.14 mg/ml*; Cancer-Preventive; Capillarifortificant; Capillarigenic; Cyclooxygenase-Activator *100 uM*; Diuretic; Hepatoprotective *IC80=30 ug/ml*; Hypotensive *ivn dog*; Pesticide; Tissue-Thromboplastin-Inhibitor *IC50=20.8 uM*; Xanthine-Oxidase-Inhibitor

**I-TERPINEOL Leaf:**

No activity reported.

**ISOAMYL-ALCOHOL Leaf:**

Emetic; Irritant; Perfume

**LEDOL Leaf:**

No activity reported.

**P-CYMENE Leaf:**

Analgesic; Antiacetylcholinesterase *IC40=1.2 mM*; Antibacillary; Antibacterial; Antiflu; Antirheumatalgic; Antiviral; FLavor *FEMA 12-250*; Fungicide; Herbicide *IC50=50 uM*; Insectifuge; Irritant; Laxative; Pesticide; Sedative; Trichomonicide *LD100=50 ug/ml*

**PARAFFIN Leaf 20,000 ppm;**

Antihemorrhoidal; Antiproctal; Emollient; Laxative *45 mL/day/orl/man/*

**PINENE Leaf 1,200 - 8,400 ppm**

Allergenic; Antibacterial; Antiseptic; Antispasmodic; Convulsant; Enterocontractant; Expectorant; Fungicide; Herbicide *IC50=30 mM*; Perfumery; Pesticide; Spasmogenic

**PINOCARVEOL Leaf 20 - 140 ppm**

No activity reported.

**PINOCARVONE Leaf:**

Perfumery

**PROTocatechuic-ACID Leaf:**

Allergenic; Alpha-Glucosidase-Inhibitor; Antiarrhythmic; Antiasthmatic; Antibacterial; Anticlastogen; Antihepatotoxic; Antiherpetic; Antiinflammatory; Antiischemic; AntiLegionella; Antileukemic; Antimelanogenic *ID60=0.5 uM/ml*; Antimutagenic; Antiophidic; Antioxidant *1/2 BHT 10 x alpha-tocopherol 2/3 quercetin*; Antiperoxidant *IC50=>100 uM IC75=200 ug/ml*; Antiradicular; Antiseptic; Antispasmodic *EC50=4.6-17 uM*; Antitumor (Colon); Antitumor (Mouth); Antitumor (Skin); Antitussive; Antiviral; Apoptotic; Carcinogenic; Cardioprotective; Chemopreventive *100 ppm orl rat*; Fungicide *500 ug/ml*; Glutathione-Depleting; Hepatotoxic; Immunostimulant; Nephrotoxic; Pesticide; Phagocytotic; Prostaglandinogenic; Secretagogue; Tyrosinase-Inhibitor *ID60=0.5 uM/ml*; Ubiquitin

**QUERCETIN Leaf:**

11B-HSD-Inhibitor; 5-Lipoxygenase-Inhibitor  $IC_{50}$  ( $\mu M$ )=4; Aldehyde-Oxidase-Inhibitor  $IC_{70-96}$ =10  $\mu M$ ; Aldose-Reductase-Inhibitor 100  $\mu M$  4  $\mu g/ml$   $IC_{50}$ =0.344  $\mu M$   $IC_{50}$ =0.84  $\mu g/ml$  cow; Allelochemic  $IC_{82}$ =1 mM; Allergenic; Analgesic; Antiaflatoxin  $IC_{50}$ =25  $\mu M$   $IC_{50}$ =7.5 ppm; Antiaggregant 30  $\mu M$   $IC_{50}$ =55  $\mu M$ ; Antiaging; Antiallergic  $IC_{50}$ =14  $\mu M$ ; Antialzheimeran; Antianaphylactic; Antiangiogenic; Antiarthritic; Antiasthmatic; Antiatherosclerotic; Antibacterial; Anticarcinomic (Breast)  $IC_{50}$ =1.5  $\mu M$ ; Anticariogenic  $ID_{50}$ =120  $\mu g/ml$ ; Anticataract; Anticolitic 400 mg/man/3x/day; Anticomplementary; AntiCrohn's; Anticystitic 1,000 mg/day/4 weeks; Antidepressant; Antidermatitic; Antidiabetic; Antielastase  $IC_{50}$ =0.8  $\mu g/ml$ ; Antiencephalitic; Antiescherichic; Antiestrogenic; Antifeedant  $IC_{52}$ =<1,000 ppm diet; Antifibrosarcomic; Antiflu; Antigastric; Antigonadotropic; AntiGTF  $ID_{50}$ =120  $\mu g/ml$ ; Antihepatotoxic; Antiherpetic 48-150  $\mu g/ml$ ; Antihistaminic  $IC_{50}$ =<10  $\mu M$ ; AntiHIV; Antihydrophobic; Antihypertensive; Antiinflammatory 20-150 mg/kg; Antileishmanic  $IC_{50}$ =64; Antileukemic 5.5-60  $\mu M$   $IC_{50}$ =10  $\mu M$   $IC_{50}$ =>10  $\mu g/ml$ ; Antileukotriene; Antilipoperoxidant  $IC_{67}$ =50; Antimalarial  $IC_{50}$ =1-6.4  $\mu g/ml$ ; Antimelanomic; Antimetastatic; Antimutagenic  $ID_{50}$ =0.62  $\mu g/ml$   $ID_{50}$ =2-5 nM; Antimyocarditic; Antinitrosaminic; Antinociceptive; Antioxidant 4.7 x Vit. E  $ED_{50}$ =2.3  $\mu M$   $IC_{47}$ =10  $\mu M$   $IC_{96}$ =300 ppm; Antipancreatic; Antiperiodontal; Antiperistaltic; Antipermeability; Antiperoxidant; Antipharyngitic; Antiplaque; Antiplasmodial  $IC_{50}$ =13-64; AntiPMS 500 mg/2x/day/wmn; Antipodriac; Antipolio; Antiproliferant 10 nM; Antiprostanoid; Antiprostatic; Antipsoriac; Antiradicular  $IC_{50}$ =4.6  $\mu M$ ; Antispasmodic; Antistreptococcic  $ID_{50}$ =120  $\mu g/ml$ ; Antithiamin; Antithrombic; Antitrypanosomic  $IC_{50}$ =13; Antitumor 10  $\mu M$ ; Antitumor (Bladder); Antitumor (Breast); Antitumor (Colon); Antitumor (Lung); Antitumor (Ovary); Antitumor (Skin) 20  $\mu M$ ; Antitumor-Promoter; Antiulcer; Antiviral 48-150  $\mu g/ml$   $IC_{50}$ =10  $\mu M$ ; Apoptotic 20-60  $\mu M$ ; ATPase-Inhibitor; Bacteristat 10 mg/ml; Bradycardiac; Calmodulin-Antagonist; cAMP-Phosphodiesterase-Inhibitor; Cancer-Preventive; Candidicide; Capillariprotective; Carcinogenic 40,000 ppm (diet) mus; Catabolic; COMT-Inhibitor; Copper-Chelator; COX-2-Inhibitor <40  $\mu M$ ; Cyclooxygenase-Inhibitor; Cytochrome-P450-1A2-Inhibitor; Cytotoxic  $ED_{50}$ =70  $\mu g/ml$   $IC_{82}$ =100  $\mu g/ml$ ; Deiodinase-Inhibitor; Diaphoretic?; Differentiator 5.5  $\mu M$ ; Estrogenic 10% genistein; Fungicide; Glucosyl-Transferase-Inhibitor  $ID_{50}$ =120  $\mu g/ml$ ; Hemostat; Hepatomagenic 5,000 ppm (diet) rat; Hepatoprotective; HIV-RT-Inhibitor  $IC_{50}$ =<1  $\mu g/ml$ ; Hypoglycemic 100 mg/kg orl rat; iNOS-Inhibitor  $IC_{50}$ =20  $\mu M$ ; Inotropic; Insulinogenic; Juvabional; Larvostat 8,000 ppm diet; Lipoxygenase-Inhibitor  $IC_{11}$ =1.25 mM  $IC_{50}$ =0.1-5  $\mu M$ ; MAO-A-Inhibitor; Mast-Cell-Stabilizer; Metal-Chelator (Copper); Metalloproteinase-Inhibitor  $IC_{50}$ =>42  $\mu M$ ; MMP-9-Inhibitor 20  $\mu M$ ; Mutagenic; NADH-Oxidase-Inhibitor; NEP-Inhibitor  $IC_{50}$ =>42  $\mu M$ ; Neuroprotective 5-25  $\mu M$ ; NF-kB-Inhibitor; NO-Inhibitor  $IC_{50}$ =20  $\mu M$   $IC_{>50}$ =125  $\mu M$ ; NO-Synthase-Inhibitor 5-50  $\mu M$ ; Ornithine-Decarboxylase-Inhibitor <10  $\mu M$ ; P450-Inducer 5  $\mu M$ ; P450-Inhibitor 50-100  $\mu M$ ; Pesticide; PGE2-Inhibitor; Phospholipase-Inhibitor; Plasmodicide; Proliferant; Prostaglandin-Synthesis-Inhibitor 40  $\mu g/ml$ ; Protein-Kinase-C-Inhibitor; PTK-Inhibitor 0.4-24  $\mu M$ ; Quinone-Reductase-Inducer 13  $\mu M$  6  $\mu M$ ; Teratologic; TNF-alpha-Inhibitor  $IC_{50}$ =3.11  $\mu M$ ; Topoisomerase-I-Inhibitor  $IC_{50}$ =12.8  $\mu g/ml$   $IC_{50}$ =42  $\mu M$ ; Topoisomerase-II-Inhibitor  $IC_{50}$ =1-6.9  $\mu g/ml$   $IC_{50}$ =23-40  $\mu M$ ; Tumorigenic 0.1% diet orl rat/yr; Tyrosinase-Inhibitor  $ID_{50}$ =70  $\mu M$ ; Tyrosine-Kinase-Inhibitor; Vasodilator; VEGF-Inhibitor; Xanthine-Oxidase-Inhibitor 3.1  $\mu M$   $IC_{50}$ =10.6  $\mu g/ml$   $IC_{50}$ =>0.4  $\mu g/ml$

#### **QUERCETOL Plant:**

Anticapillary-Fragility

#### **QUERCETOL-3-GLUCOSIDE Plant:**

No activity reported.

**QUERCETRIN Leaf:**

No activity reported.

**QUERCITRIN Plant:**

ACE-Inhibitor  $IC_{50}=0.67\text{ mM}$ ; Aldose-Reductase-Inhibitor  $0.1-100\text{ }\mu\text{M}$   $0.5-4\text{ }\mu\text{g/ml}$   $IC_{50}=2\text{ }\mu\text{M}$   $IC_{50}=64\text{ }\mu\text{M}$  rat  $IC_{55}=0.1\text{ }\mu\text{M}$   $IC_{55}=0.15\text{ }\mu\text{M}$ ; Antiarrhythmic; Antibacterial; Anticataract; Antiedemic; Antifeedant  $IC_{52}<1,000\text{ ppm diet}$ ; Antiflu; Antihemorrhagic; Antihepatotoxic; Antiherpetic; Antiinflammatory; Antimutagenic  $ID_{50}=2-5\text{ nM}$ ; Antioxidant  $IC_{50}=120\text{ }\mu\text{M}$ ; Antipurpuric; Antispasmodic; Antistaphylococcic  $0.412\%$ ; Antithrombogenic; Antitumor; Antiulcer; Antiviral; Cancer-Preventive; Cardiotonic; Choleric; CNS-Depressant; Cyclooxygenase-Activator  $200\text{ }\mu\text{M}$ ; Detoxicant; Diuretic; Dye; Hemostat; Hepatonic; Hypoglycemic; Hypotensive; Insectiphile; MAO-A-Inhibitor; MAO-Inhibitor; Paralytic; Pesticide; Vasopressor

**RUTIN Leaf:**

5-HT-Inhibitor; Aldehyde-Oxidase-Inhibitor  $IC_{27-52}=10\text{ }\mu\text{M}$ ; Aldose-Reductase-Inhibitor  $100\text{ }\mu\text{M}$   $4\text{ }\mu\text{g/ml}$ ; Allelochemic; Antiaggregant  $ED_{50}=33\text{ nmol/kg iv}$ ; Antiallergic; Antiapoplectic; Antiatherogenic; Antiatherosclerotic; Antibacterial; Anticancer; Anticapillary-Fragility  $20-100\text{ mg orl man}$ ; Anticataract; Anticlastogen; Anticonvulsant; AntiCVI  $270\text{ mg/man/day}$ ; Antidementia; Antidermatitic; Antidiabetic; Antiedemic  $270\text{ mg/day orl man}$ ; Antierythemic; Antifeedant; Antiglaucomic  $60\text{ mg/day}$ ; Antihematuric; Antihemorrhoidal; Antihepatotoxic; Antiherpetic; Antihistaminic; Antihypertensive; Antiinflammatory  $20\text{ mg/kg}$ ; Antimalarial  $IC_{50}>100\text{ }\mu\text{g/ml}$ ; Antimelanomic; Antimetastatic; Antimutagenic  $ID_{50}=2-5\text{ nM}$ ; Antinephritic; Antinociceptive; Antioxidant  $IC_{28}=30\text{ ppm}$   $IC_{50}=120\text{ }\mu\text{M}$   $IC_{54}=10\text{ }\mu\text{M}$ ; Antiperoxidant  $IC_{50}=10-20\text{ }\mu\text{M}$ ; Antiplatelet; Antiproliferant  $50-75\text{ }\mu\text{M/l}$ ; Antiprotozoal; Antipurpuric; Antiradicular  $9\text{ x quercetin}$ ; Antispasmodic; Antisunburn; Antithrombogenic  $EC_{50}=500\text{ nM}$ ; Antithyroid  $IC_{50}=68\text{ }\mu\text{M}$ ; Antitrypanosomic  $100\text{ mg/kg}$ ; Antitumor; Antitumor-Promoter; Antiulcer; Antivaricose; Antiviral; Apoptotic  $75\text{ }\mu\text{M/l}$ ; cAMP-Phosphodiesterase-Inhibitor; Cancer-Preventive; Capillariprotective; Catabolic; Chemopreventive; Cytoprotective  $IC_{50}=3\text{ }\mu\text{M}$ ; Estrogenic?; Hemostat; Hepatomagenic  $20,000\text{ ppm (diet) rat}$ ; Hepatoprotective  $20\text{ mg/kg rat}$ ; Hypocholesterolemic; Hypotensive; Immunomodulator; Insecticide; Insectiphile; Juvabional; Larvostat  $IC_{95}=4,000-8,000\text{ ppm diet}$ ; Lipoygenase-Inhibitor  $IC_{75}=2.5\text{ mM}$ ; Mutagenic; Myoprotective; Myorelaxant; Oviposition-Stimulant; PAF-Inhibitor; Pesticide; Protisticide; Radioprotective; Sunscreen; Topoisomerase-II-Inhibitor  $IC_{50}=1\text{ }\mu\text{g/ml}$ ; Vasodilator; Vasopressor

**TRANS-PINOCARVEOL Leaf:**

Antimalarial  $IC_{50}=5-50\text{ }\mu\text{g/ml}$ ; Antiplasmodial

**TRITRIACONTANE-16,18-DIONE Plant:**

No activity reported.

**VALERALDEHYDE Leaf:**

No activity reported.

**VIRIDIFLOROL Leaf:**

Antiacetylcholinesterase  $IC_{50}=25\text{ }\mu\text{g/ml}$