

# Dr. Duke's Phytochemical and Ethnobotanical Databases

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## Chemicals and their Biological Activities in: *Melaleuca viridiflora* SOLAND.EX GAERTN. (Myrtaceae) -- Broad-Leaf Tea-Tree, Niaouli

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### Chemicals

#### 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

#### ALPHA-TERPINEOL *Leaf*:

ACE-Inhibitor 100 ug/ml (weak activity); Aldose-Reductase-Inhibitor 100 ug/ml; Allelopathic; Antiacne; Antibacterial MIC=800-1,600 ug/ml; Anticancer; Anticariogenic; Antiinflammatory; Antiproliferant; Antiseptic; Cicatrizant ED50=240 ug/g mus; FLavor FEMA 5-40; Insecticide 1.29 uM/fly; Interleukin-6-Inhibitor; Mosquitofuge > Deet; Motor-Depressant; Nematicide MLC=1 mg/ml; Perfumery; Pesticide; Sedative; Termiticide IC100=5 mg/g; Transdermal; Vulnerary ED50=240 ug/g mus

#### BENZALDEHYDE *Leaf*:

Allergenic; Anesthetic; Antibacterial; Anticancer; Antimutagenic; Antipeptic; Antiseptic; Antispasmodic; Antitumor; Candidicide; FLavor FEMA 150-800; Immunostimulant; Insecticide; Insectifuge 50 ppm; Motor-Depressant; Narcotic; Nematicide MLC=1 mg/ml; Pesticide; Sedative; Termiticide LD100=5 mg/g; Tyrosinase-Inhibitor ID50=0.82 mM ID50=820 uM ID50=830 uM ID50=87 ug/ml

#### CINEOLE *Leaf* 4,600 - 15,600 ppm

No activity reported.

#### CINNAMIC-ACID-METHYL-ESTER *Leaf* 7,500 - 19,500 ppm

No activity reported.

#### CITRAL *Leaf*:

Allergenic; Antiallergic; Antianaphylactic; Antibacterial; Antihistaminic; Antiseptic 5.2 x phenol; Antishock; Barbituate-Synergist; Bronchorelaxant; Cancer-Preventive; Expectorant; FLavor FEMA 4-170; Fungicide MIC 625 ug/ml; Glaucomagenic; Herbicide IC50=115 uM; Nematicide IC52=100 ug/ml MLC=100-260 ug/ml; Perfumery; Pesticide; Prostatitigenic 185 mg/kg/day/3 ms; Sedative ED 1-32 mg/kg;

Teratogenic; Trichomonicide *LD100=150 ug/ml*; Tyrosinase-Inhibitor *ID50=1.5 mM*

**DIPENTENE Leaf:**

Allergenic; Antibacterial; Antiviral; Expectorant; Irritant; Pesticide; Sedative

**EUGENOL Leaf:**

Acaricide *LD50=5.47 ug/sq cm cf DEET at 37.59 ug/sq cm*; Allergenic; Analgesic; Anesthetic *200-400*; Antiaggregant *IC50=0.3 uM*; Antiarachidonate; Antibacterial *500 ppm MBC=400 ug/ml*; Anticonvulsant; Antiedemic *100*; Antiestrogenic; Antifeedant; Antigenotoxic *50-500 mg/kg orl mus*; Antiherpetic *IC50=16.2-25.6 ug/ml*; Antiinflammatory (*11 uM IC~97=1,000 uM*); Antikeratotic *IC50=16.2-25.6 ug/ml*; Antimitotic; Antimutagenic; Antinitrosating; Antioxidant *10 uM IC65=30 ppm*; Antiprostaglandin *11 uM IC50=9.2 mM*; Antipyretic *3 ml/man/day*; Antiradicular *EC50=2 ul/l*; Antisalmonella *MIC=400 ug/ml*; Antiseptic *3 ml/man/day 400 ug/ml*; Antispasmodic; Antistaphylococcic; Antithromboxane; AntiTNF; Antitumor; Antiulcer; Antiviral *IC50=16.2-25.6 ug/ml*; Apifuge; Calcium-Antagonist *IC50=200 uM gpg IC50=224 uM*; Cancer-Preventive; Candidicide; Carcinogenic?; Carminative; Choleric; CNS-Depressant; COX-1-Inhibitor *IC97=1,000 uM*; COX-2-Inhibitor *IC50=129 uM IC>97=1,000 uM*; Cytochrome-P450-Inhibitor; Cytotoxic *25 ug/ml*; Dermatitigenic; Enterorelaxant; FLavor *FEMA 10-500*; Fungicide; Hepatoprotective *100 ppm*; Herbicide; Insecticide; Insectifuge; Irritant; Juvabional; Larvicide; Motor-Depressant; Nematicide *MLC=2,000 ug/ml*; Neurotoxic; Perfumery; Pesticide; Prostaglandin-Synthesis-Inhibitor *1 mM rbt IC50=9.2 uM*; Sedative; Termiticide *LD100=5 mg/g*; Trichomonicide *LD100=300 ug/ml*; Trichomonistat *IC50=10 ug/ml*; Trypsin-Enhancer; Ulcerogenic; Varroacide; Vasodilator; Vermifuge

**L-LIMONENE Leaf:**

Antiacetylcholinesterase *IC25=1.2 mM IC27=164 ug/ml*

**LINALOL Leaf:**

No activity reported.

**LINALOL-MONOXIDE Leaf:**

No activity reported.

**NEROLIDOL Leaf:**

Aldose-Reductase-Inhibitor; Allergenic; Antiacne; Antibacterial *MIC=25-200 ug/ml*; Anticariogenic; Antifeedant *1 mM (diet)*; Antistreptococcic; FLavor *FEMA 1-10*; Nematicide *MLC=1 mg/ml*; Perfumery; Pesticide

**SESQUITERPENES Leaf:**

No activity reported.

**TRANS-BETA-OCIMENE Leaf 2,000 - 5,200 ppm**

No activity reported.