

List of All Chemicals

P Lavandula angustifolia (Lamiaceae)

Common name(s)

English Lavender

How used

GRAS

*Unless otherwise noted all references are to Duke, James A. 1992. Handbook of phytochemical constituents of GRAS herbs and other economic plants. Boca Raton, FL. CRC Press.

Chemical	Part All ▾	Low PPM	High PPM	StdDev	*Reference
1,8-CINEOLE	Flower	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Activities (67)

(-)-Chronotropic 87 nl/ml	Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin.				
(-)-Inotropic 87 nl/ml	Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin.				
Acaricide LC100=6 uM					
Allelopathic					
Allergenic					
Anesthetic					
Anthelmintic	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.				
Antiacetylcholinesterase IC50=41 ug/ml					
Antiallergic	J. Food Hyg. Soc. Jap. 33(6): 569.				
Antibacterial 50 ppm					
Antibronchitic					
Anticariogenic					
Anticatarrh	Martindale's 29th				
Anticholinesterase IC50=50-70					
Antifatigue					
Antihalitosis	American Health, 12(4): 17, 1993.				
Antiinflammatory					
Antilaryngitic					
Antinociceptive					
Antipharyngitic					
Antiplaque					
Antirheumatic					
Antirhinitic					
Antiseptic	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.				
Antisinusitic					
Antispasmodic					
Antistaphylococcic 50 ppm					
Antitussive					
Antiulcer					
CNS-Stimulant					
Candidicide					
Carcinogenic	Zebovitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. Compendium of Safety Data Sheets for Research and Industrial Chemicals. VCH Publishers, New York. 3560-4253.				
Choleretic					
Convulsant					
Counterirritant	Martindale's 29th				
Cytochrome-P450-Inducer					
Decongestant					
Degranulant 0.3 ul/ml					
Dentifrice	Martindale's 29th				

Edemagenic inj	
Expectorant	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
FLavor FEMA 1-200	Aloe Research Council - Duke writeup of non-peer reviewed book by Coats and draft by Henry
Fungicide	
Gastroprotective	
Gram(+)icide	
Gram(-)icide	
Hepatotonic	
Herbicide IC50=78 uM	Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp.
Hypotensive	
Inflammatory inj	
Insectifuge	
Irritant	Rinzler, C. A. 1990. The Complete Book of Herbs, Spices and Condiments. Facts on File, New York. 199 pp.
Myorelaxant	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
Nematicide	Nigg, H.N. and Seigler, D.S., eds. 1992. Phytochemical Resources for Medicine and Agriculture. Plenum Press, New York. 445 pp.
Neurotoxic	
P450-Inducer	
Pediculicide 2.3 x pyrethrin	
Perfume	Aloe Research Council - Duke writeup of non-peer reviewed book by Coats and draft by Henry
Pesticide	
Rubefacient	Martindale's 29th
Secretagogue	
Sedative	
Spasmogenic	
Surfactant	
Testosterone-Hydroxylase-Inducer	
Transdermal	
Trichomonicide LD100=1,000 ug/ml	

1-OCTEN-3-OL	Flower	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
1-OCTEN-3-YL-ACETATE	Flower	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
2,6-DIMETHYL-5-ACETOXYMETHYL-HEPT-6-EN-3-ONE	Flower	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
2,6-DIMETHYL-5-ACETOXYMETHYL-HEPTA-1,6-DIEN-3-ONE	Flower	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
2,6-DIMETHYL-6-ACETOXY-OCT-7-EN-3-ONE	Flower	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
2,6-DIMETHYL-6-ACETOXY-OCTA-1,7-DIEN-3-ONE	Flower	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
2-METHYL-BUT-3-EN-1-OL	Flower	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
4-BUTANOLIDE	Flower	--	--	*
5-PENTYL-5-PENTANOLIDE	Flower	--	--	*
ALPHA-NORSANTALENONE	Flower	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
ALPHA-PHOTOSANTALOL-A	Flower	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
ALPHA-PHOTOSANTALOL-B	Flower	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
ALPHA-PINENE	Plant	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Activities (28)

Allelochemic	
Allergenic	
Antiacne	
Antibacterial	
Antifeedant	
Antiflu	Economic & Medicinal Plant Research, 5: 195.
Antiinflammatory 500 mg/kg	
Antipneumonic	
Antiseptic	
Antispasmodic	
Antistaphylococcic	
Antiviral	Economic & Medicinal Plant Research, 5: 195.
Cancer-Preventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.
Coleoptophile	
Expectorant	Michael Castleman 1991. The Healing Herbs. Rodale Press, Emmaus, PA 436 pp.
FLavor FEMA 15-150	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry
Herbicide IC50=30 uM	Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp.
Insecticide 0.82 uM/fly	
Insectifuge 50 ppm	
Insectiphile	J. Stored. Prod. Res., 22:141, 1986.
Irritant	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
P450-2B1-Inhibitor IC50=0.087 uM	
Perfumery	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry
Pesticide	
Sedative	Lawrence Review of Natural Products, Jun-90.
Spasmogenic	
Tranquilizer	Lawrence Review of Natural Products, Jun-90.
Transdermal	

ALPHA-SANTALAL	Flower	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
ALPHA-SANTALENE	Flower	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
ALPHA-SANTALENIC-ACID	Flower	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
AMYL-ALCOHOL	Plant	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Activities (1)

FLavor FEMA 35-3,500 ppm	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry
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BERGAMOTENE	Plant	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
BETA-OCIMENE	Flower	--	--	Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
BETA-PHELLANDRENE	Flower	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Activities (3)

Expectorant	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Fungicide	Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin.
Perfumery	Merck 11th Edition

BETA-PINENE	Plant	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
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Activities (13)

Allergenic	
Antiinflammatory	
Antiseptic	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
Antispasmodic	
Candidicide	
FLavor FEMA 15-600	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry
Herbicide	Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp.
Insectifuge	Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990.
Irritant	Zebovitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. Compendium of Safety Data Sheets for Research and Industrial Chemicals. VCH Publishers, New York. 3560-4253.
Perfumery	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry
Pesticide	
Spasmogenic	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
Transdermal	

BETA-SANTALENE Flower -- -- Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Activities (2)

Antiinflammatory	
Perfumery	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry

BORNEOL Plant -- -- Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Activities (35)

(-)-Chronotropic 29 ug/ml	Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin.
(-)-Inotropic 29 ug/ml	Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin.
Allelochemic	
Analgesic	
Antiacetylcholine	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
Antibacterial MIC=125-250 ug/ml	
Antibronchitic	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Antiescherichic MIC=125 ug/ml	
Antifeedant	
Antiinflammatory	
Antiotitic	
Antipyretic	
Antisalmonella MIC=125 ug/ml	
Antispasmodic ED50=0.008 mg/ml	
Antistaphylococcic MIC=250 ug/ml	
Antiyeast MIC=250 ug/ml	
CNS-Stimulant	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
CNS-Toxic	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Candidicide MIC=250 ug/ml	
Choleretic	
FLavor FEMA<1	Aloe Research Council - Duke writeup of non-peer reviewed book by Coats and draft by Henry
Fungicide	
Hepatoprotective	
Herbicide IC50=470 mM	Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology, v. 4, Oryx Press, Phoenix, 1989, 267pp.
Herbicide IC50=470 uM	Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp.
Inhalant	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Insect-Repellent	
Insectifuge	Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990.
Irritant	Rinzler, C. A. 1990. The Complete Book of Herbs, Spices and Condiments. Facts on File, New York. 199 pp.
Myorelaxant	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
Nematicide MLC=1 mg/ml	Shoyakugaku Zasshi, 44: 183.
Perfumery	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Pesticide	
Sedative	Medline (post 1990 searches filed in my computer)
Tranquilizer	

BORNYL-ACETATE	Plant	2250.0	6750.0	3.85	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
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Activities (12)

(-)-Chronotropic 933 nl/ml	Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin.
(-)-Inotropic 933 nl/ml	Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin.
Antibacterial	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
Antifeedant	Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990.
Antispasmodic ED50=0.09 mg/ml	Fitoterapia No.59-1984.
Antiviral	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
Expectorant	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
FLavor FEMA 70-80	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry
Insectifuge	Blaschek, W., Hansel, R., Keller, K., Reichling, J., Rimpler, H., and Schneider, G. eds. 1998. Hager's Handbuch der Pharmazeutischen Praxis, Auflage Band 2 (A-K), 909 pp., (L-Z), 858 pp. Springer-Verlag, Berlin.
Myorelaxant	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
Pesticide	
Sedative	

BUTYRIC-ACID

Flower

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Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Activities (6)

Anticancer	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antitumor	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Apoptotic	
Bruchifuge	Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990.
Nematistat 880 ug/ml	Nigg, H.N. and Seigler, D.S., eds. 1992. Phytochemical Resources for Medicine and Agriculture. Plenum Press, New York. 445 pp.
Pesticide	

CAMPHENE

Plant

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Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Activities (9)

Allelopathic	Wright, C.W. (Ed) 2002. Medicinal & Aromatic Plants-Industrial Profiles. Artemisia. 344pp. Maffei, M. (Ed) 2002. Vetiveria. The Genus Vetiveria. Taylor & Francis. NY, NY. 191pp. Southwell, I., Lowe, R. (Eds) 1999. Tea Tree. The Genus Melaleuca. Harwood Acad. Pub. Amsterdam, Netherlands.
Antilithic?	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Antioxidant	Jim Duke's personal files.
Expectorant	Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin.
FLavor FEMA 15-175	Aloe Research Council - Duke writeup of non-peer reviewed book by Coats and draft by Henry
Hypocholesterolemic?	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Insectifuge	Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990.
Pesticide	
Spasmogenic	Fitoterapia No.59-1984.

CAMPHOR

Flower

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Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Activities (41)

Allelopathic	
Analgesic	
Anesthetic	
Antiacne	Nigg, H.N. and Seigler, D.S., eds. 1992. <i>Phytochemical Resources for Medicine and Agriculture</i> . Plenum Press, New York. 445 pp.
Antidiarrheic 500 ug/ml	Wealth of India.
Antidysenteric 500 ug/ml	Wealth of India.
Antiemetic 100-200 mg man orl	Huang, K. C. 1993. <i>The Pharmacology of Chinese Herbs</i> . CRC Press, Boca Raton, FL 388 pp.
Antifeedant IC50=5,000 ppm diet	Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, <i>Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology</i> , v. 4, Oryx Press, Phoenix, 1989, 267pp.
Antifibrositic	Martindale's 28th
Antineuralgic	Martindale's 28th
Antipruritic	Merck 11th Edition
Antiseptic	Merck 11th Edition
Antispasmodic ED50=0.075 mg/ml	Fitoterapia No.59-1984.
CNS-Stimulant	
Cancer-Preventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.
Carminative	Yamamoto, A., Umemori, S., and Muranishi, S. 1993. Absorption Enhancement of Intrapulmonary Administered Insulin by Various Absorption Enhancers and Protease Inhibitors in Rats. <i>J. Pharm. Pharmacol.</i> 46: 14-18, 1994.
Convulsant	R.J. Hixtable (Huxtable, R.J. (as T. Max). 1992. This and That: The Essential Pharmacology of Herbs and Spices. <i>Tips</i> 13:15-20 Huxtable, R.J. 1992b. The Myth of Benificent Nature. The Risk of Herbal Preparations. <i>Ann. Intern. Med.</i> 117(2):165-6; Huxtable, R.
Cosmetic	Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp.
Counterirritant	Martindale's 28th
Decongestant	Nigg, H.N. and Seigler, D.S., eds. 1992. <i>Phytochemical Resources for Medicine and Agriculture</i> . Plenum Press, New York. 445 pp.
Deliriant	Merck 11th Edition
Ecbolic	
Emetic	
Epileptogenic	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. <i>Herbal Medicine - A Guide for Health-care Professionals</i> . The Pharmaceutical Press, London. 296pp.
Expectorant	Martindale's 29th
Fungicide ED50=2.7 mM	Keeler, R.F. and Tu, A.T. eds. 1991. <i>Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6)</i> Marcel Dekker, Inc. NY. 665 pp.
Herbicide IC50=3.3-180 mM	Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, <i>Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology</i> , v. 4, Oryx Press, Phoenix, 1989, 267pp.
Insect-Repellent	
Insectifuge	
Irritant	Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp.
Nematicide MLC=1 mg/ml	Shoyakugaku Zasshi, 44: 183.
Oculoirritant	
P450-2B1-Inhibitor IC50=7.89 uM	
Pesticide	
Respirainhibitor	Merck 11th Edition
Respirastimulant	Huang, K. C. 1993. <i>The Pharmacology of Chinese Herbs</i> . CRC Press, Boca Raton, FL 388 pp.
Rubefacient	
Stimulant	R.J. Hixtable (Huxtable, R.J. (as T. Max). 1992. This and That: The Essential Pharmacology of Herbs and Spices. <i>Tips</i> 13:15-20 Huxtable, R.J. 1992b. The Myth of Benificent Nature. The Risk of Herbal Preparations. <i>Ann. Intern. Med.</i> 117(2):165-6; Huxtable, R.
Transdermal	
Verrucolytic	Nigg, H.N. and Seigler, D.S., eds. 1992. <i>Phytochemical Resources for Medicine and Agriculture</i> . Plenum Press, New York. 445 pp.
Vibriocide 500 ug/ml	Wealth of India.

CAPROALDEHYDE	Flower	--	--	Lawrence, B.M., <i>Essential Oils 1976-1977</i> , <i>Essential Oils 1978</i> , <i>Essential Oils 1979-1980</i> .
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CAPROIC-ACID	Flower	--	--	Lawrence, B.M., <i>Essential Oils 1976-1977</i> , <i>Essential Oils 1978</i> , <i>Essential Oils 1979-1980</i> .
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Activities (1)

Irritant

CAPRYLALDEHYDE	Plant	--	--	Lawrence, B.M., <i>Essential Oils 1976-1977</i> , <i>Essential Oils 1978</i> , <i>Essential Oils 1979-1980</i> .
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CARYOPHYLLENE	Flower	--	--	Lawrence, B.M., <i>Essential Oils 1976-1977</i> , <i>Essential Oils 1978</i> , <i>Essential Oils 1979-1980</i> .
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Activities (31)

Aldose-Reductase-Inhibitor	
Allergenic	
Analgesic	Taylor, Leslie. 2005. The Healing Power of Rainforest Herbs. SquareOne Publisher, Garden City Park, NY. 519 pp.
Antiacne	
Antiasthmatic	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
Antibacterial	
Anticariogenic MIC=>1,600 ug/ml	Muroi, H. and Kubo, I. 1993. Combination Effects of Antibacterial Compounds in Green Tea Flavor against Streptococcus mutans. J. Agric. Food Chem. 41: 1102-1105.
Antidermatitic	
Antiedemic	Shimizu,*M., et al. 1990. Anti-inflammatory Constituents of Topically Applied Crude Drugs. IV.1) Constituents and Anti-inflammatory Effect of Paraguayan Crude Drug 'Alhucema' (Lavandula latifolia Vill.)2). Chem. Pharm. Bull. 38(8): 2283-2284, 1990.
Antifeedant 500 ppm	Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp.
Antiinflammatory IC50=100 uM	Shimizu,*M., et al. 1990. Anti-inflammatory Constituents of Topically Applied Crude Drugs. IV.1) Constituents and Anti-inflammatory Effect of Paraguayan Crude Drug 'Alhucema' (Lavandula latifolia Vill.)2). Chem. Pharm. Bull. 38(8): 2283-2284, 1990.
Antileishmanic	
Antionychotic	Taylor, Leslie. 2005. The Healing Power of Rainforest Herbs. SquareOne Publisher, Garden City Park, NY. 519 pp.
Antiproliferant	
Antispasmodic	
Antistaphylococcic	
Antistreptococcic	
Antitumor	Zheng, G-Q., Kenney, P.M., and Lam, L.K.T. Sesquiterpenes From Clove (Eugenia caryophyllata) As Potential Anticarcinogenic Agents. Journal of Natural Products 55(7): 999-1003, 1992.
Antiulcer	Taylor, Leslie. 2005. The Healing Power of Rainforest Herbs. SquareOne Publisher, Garden City Park, NY. 519 pp.
Candidicide	
FLavor FEMA 20-200	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry
Fungicide	
Gastroprotective	Taylor, Leslie. 2005. The Healing Power of Rainforest Herbs. SquareOne Publisher, Garden City Park, NY. 519 pp.
Insectifuge	
Irritant	Zebovitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. Compendium of Safety Data Sheets for Research and Industrial Chemicals. VCH Publishers, New York. 3560-4253.
Larvicide	
Mosquitocide	
Perfumery	Merck 11th Edition
Pesticide	
Sedative	
Termitifuge	Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990.

CARYOPHYLLENE-OXIDE

Flower

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Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Activities (8)

Antiedemic	Shimizu,*M., et al. 1990. Anti-inflammatory Constituents of Topically Applied Crude Drugs. IV.1) Constituents and Anti-inflammatory Effect of Paraguayan Crude Drug 'Alhucema' (Lavandula latifolia Vill.)2). Chem. Pharm. Bull. 38(8): 2283-2284, 1990.
Antifeedant	Bettarini, F., Borgonovi, G.E., et al. 1991. Antiparasitic Compounds from East African Plants: Isolation and Biological Activity of Anonaine, Matricarianol, Canthin-6-One and Caryophyllene Oxide. Insect Sci. Applic. 14(1): 93-99, 1993.
Antiinflammatory	Shimizu,*M., et al. 1990. Anti-inflammatory Constituents of Topically Applied Crude Drugs. IV.1) Constituents and Anti-inflammatory Effect of Paraguayan Crude Drug 'Alhucema' (Lavandula latifolia Vill.)2). Chem. Pharm. Bull. 38(8): 2283-2284, 1990.
Antitumor	Zheng, G-Q., Kenney, P.M., and Lam, L.K.T. Sesquiterpenes From Clove (Eugenia caryophyllata) As Potential Anticarcinogenic Agents. Journal of Natural Products 55(7): 999-1003, 1992.
Calcium-Antagonist ED50=32 uM gpg	
Fungicide	
Insecticide	Bettarini, F., Borgonovi, G.E., et al. 1991. Antiparasitic Compounds from East African Plants: Isolation and Biological Activity of Anonaine, Matricarianol, Canthin-6-One and Caryophyllene Oxide. Insect Sci. Applic. 14(1): 93-99, 1993.
Pesticide	

CEDRENE

Plant

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List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Activities (1)

Cancer-Preventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.
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CITRONELLOL

Flower

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Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Activities (15)

Allergenic	
Antibacterial	
Antiseptic	
Antistaphylococcic	
Antistreptococcic	
Candidicide	
FLavor FEMA 1-50	Aloe Research Council - Duke writeup of non-peer reviewed book by Coats and draft by Henry
Fungicide	HerbalGram No. 17.
Herbicide IC50=160 uM	Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp.
Irritant	Zebovitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. Compendium of Safety Data Sheets for Research and Industrial Chemicals. VCH Publishers, New York. 3560-4253.
Nematicide MLC=100 ug/ml	Shoyakugaku Zasshi, 44: 183.
Perfumery	Merck 11th Edition
Pesticide	
Sedative	Wagner & Wolff, eds. 1977. New Natural Products (RS164. I56. 176)
Trichomonicide LD100=300 ug/ml	

COUMARIC-ACID	Plant	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
COUMARIN	Plant	1000.0	1500.0	-0.32	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Activities (57)

Aldose-Reductase-Inhibitor 10 ug/ml cow (weak activity, 11% inhibition)	Okada,Y,et al.1995.Search for Naturally Occurring Substances to Prevent the Complications of Diabetes.II.Inhibitory Effect of Coumarin and Flavonoid Derivatives on Bovine Lens Aldose Reductase and Rabbit Platelet Aggregation.Chem Pharm Bull43(8):1385-1387
Allelochemic IC100=2 mM	Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology, v. 4, Oryx Press, Phoenix, 1989, 267pp.
Analgesic	Zebovitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. Compendium of Safety Data Sheets for Research and Industrial Chemicals. VCH Publishers, New York. 3560-4253.
Anesthetic	
Antiaaggregant	
Antiandrogenic	Planta Medica, 56(6): 671, 1990.
Antibrucellosis	Gawron, A., Gorski*, G., Glowniak**, K. 1989. Increased proliferation of phytohaemagglutinin (PHA)-stimulated human leucocytes after 8-methoxy psoralen treatment. J. Pharm. Pharmacol. 42: 194-195, 1990.
Anticancer (Kidney) 400-7,000 mg/day	Mills, Simon and Bone, Kerry. 2000. Phytotherapy. Churchill Livingstone, Edinburgh.
Anticancer (Prostate) 400-7,000 mg/day	Mills, Simon and Bone, Kerry. 2000. Phytotherapy. Churchill Livingstone, Edinburgh.
Antidiuretic	
Antiedemic	Shimizu *M., et al. 1990. Anti-inflammatory Constituents of Topically Applied Crude Drugs. IV.1) Constituents and Anti-inflammatory Effect of Paraguayan Crude Drug 'Alhucema' (Lavandula latifolia Vill.)2). Chem. Pharm. Bull. 38(8): 2283-2284, 1990.
Antiesherichic	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Antiinflammatory	Shimizu *M., et al. 1990. Anti-inflammatory Constituents of Topically Applied Crude Drugs. IV.1) Constituents and Anti-inflammatory Effect of Paraguayan Crude Drug 'Alhucema' (Lavandula latifolia Vill.)2). Chem. Pharm. Bull. 38(8): 2283-2284, 1990.
Antilymphedemic	Mills, Simon and Bone, Kerry. 2000. Phytotherapy. Churchill Livingstone, Edinburgh.
Antimelanomic 50 mg/day	
Antimetastatic 50 mg/man/day	Mills, Simon and Bone, Kerry. 2000. Phytotherapy. Churchill Livingstone, Edinburgh.
Antimitotic	Pandeya, S.N. 1970. Biological Activity of Adamantyl Derivatives. The Indian Journal of Pharmacy, 33: 7.
Antimononucleotic	Mills, Simon and Bone, Kerry. 2000. Phytotherapy. Churchill Livingstone, Edinburgh.
Antimutagenic	Economic & Medicinal Plant Research, 6: 235.
Antimycoplasmotic	Mills, Simon and Bone, Kerry. 2000. Phytotherapy. Churchill Livingstone, Edinburgh.
Antipsittacotic	Mills, Simon and Bone, Kerry. 2000. Phytotherapy. Churchill Livingstone, Edinburgh.
Antipsoriac	Pandeya, S.N. 1970. Biological Activity of Adamantyl Derivatives. The Indian Journal of Pharmacy, 33: 7.
Antitoxoplasmotic	Mills, Simon and Bone, Kerry. 2000. Phytotherapy. Churchill Livingstone, Edinburgh.
Antitumor 50 mg/day	
Antitumor (GI)	
Antitumor (Kidney) 400-7,000 mg/day	Mills, Simon and Bone, Kerry. 2000. Phytotherapy. Churchill Livingstone, Edinburgh.
Antitumor (Prostate) 400-7,000 mg/day	Mills, Simon and Bone, Kerry. 2000. Phytotherapy. Churchill Livingstone, Edinburgh.
Bacteristat	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Bruchiphobe	
Cancer-Preventive 5-25 ug/ml	Gawron, A. and Glowniak, K. 1987. Cytostatic Activity of Coumarins in vitro. Planta Medica 1987: 526.
Carcinogenic 200 mg/kg orl mus	Mills, Simon and Bone, Kerry. 2000. Phytotherapy. Churchill Livingstone, Edinburgh.
Cardiodepressant	
Cardiotonic	
Chemopreventive	

DME-Inhibitor IC50=57.5 uM	Advance in Chinese Medicinal Materials Research. 1985. Eds. H. M. Chang, H. W. Yeung, W. -W. Tso and A. Koo. World Scientific Publishing Co., Philadelphia Pa., page 134.
Emetic	
Estrogenic	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
Fungicide	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Hemorrhagic	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Hepatotoxic 0.8-1.71 mM/kg orl rat	
Hepatotoxic 2,500 ppm diet	
Hepatotoxic 100 mg/kg dog	
Hypnotic	Schultes, R.E. De Plantis Toxicariis e Mundo Novo Tropicale Commentationes XXXVI. Justicia (Acanthaceae) as a Source of an Hallucinogenic Snuff. Economic Botany 44(1): 61-70, 1990.
Hypoglycemic 250-1,000 mg/kg orl	Economic & Medicinal Plant Research, 6: 165
Immunostimulant	
Juvabional	Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990.
Larvostat	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Lymphocytogenic 100 mg/day	Gawron, A., Gorski*, G., Glowinski**, K. 1989. Increased proliferation of phytohaemagglutinin (PHA)-stimulated human leucocytes after 8-methoxypsoralen treatment. J. Pharm. Pharmacol. 42: 194-195, 1990.
Lymphokinetic	
Narcotic	
Ovicide	
Pesticide	
Phagocytotic	Planta Medica, 56(6): 671, 1990.
Piscicide	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Respirodepressant	
Rodenticide	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Sedative	Schultes, R.E. De Plantis Toxicariis e Mundo Novo Tropicale Commentationes XXXVI. Justicia (Acanthaceae) as a Source of an Hallucinogenic Snuff. Economic Botany 44(1): 61-70, 1990.

CUMINALDEHYDE	Flower	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
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Activities (10)

Antibacterial	
FLavor FEMA <1	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry
Fungicide	Singh*, G., Upadhyay, R.K. 1990. Fungitoxic Activity of Cumaldehyde, Main Constituent of the Cuminum cyminum Oil. Fitoterapia 62(1): 86, 1991.
Irritant	Zebovitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. Compendium of Safety Data Sheets for Research and Industrial Chemicals. VCH Publishers, New York. 3560-4253.
Larvicide	Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
Perfumery	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Pesticide	
Sedative	Zebovitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. Compendium of Safety Data Sheets for Research and Industrial Chemicals. VCH Publishers, New York. 3560-4253.
Tyrosinase-Inhibitor ID50=0.05 mM	
Ulcerogenic	Zebovitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. Compendium of Safety Data Sheets for Research and Industrial Chemicals. VCH Publishers, New York. 3560-4253.

CURCUMENE	Plant	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
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DELTA-3-CARENE	Flower	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
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Activities (8)

Allergenic?	
Antibacterial	Revista Itiliana Eppos, 12: 5, 1994.
Antiinflammatory ipr	Internat. J. Oriental Med. 15(4): 194, 1990+
Dermatitigenic	
FLavor FEMA	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry
Insectifuge	Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990.
Irritant	
Pesticide	

DELTA-CADINENE	Flower	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
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Activities (9)					
Aldose-Reductase-Inhibitor					
Antiacne					
Antibacterial MIC800 ug/ml					Muroi, H. and Kubo, I. 1993. Combination Effects of Antibacterial Compounds in Green Tea Flavor against Streptococcus mutans. J. Agric. Food Chem. 41: 1102-1105.
Anticariogenic MIC800 ug/ml					Muroi, H. and Kubo, I. 1993. Combination Effects of Antibacterial Compounds in Green Tea Flavor against Streptococcus mutans. J. Agric. Food Chem. 41: 1102-1105.
Antistreptococcic					
Cytochrome-P450-Inducer					
P450-Inducer					
Pesticide					
Testosterone-Inducer					

DIHYDROCOUMARIN	Flower	--	--		*
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Activities (2)					
Cancer-Preventive					Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.
FLavor FEMA 5-80					Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry

EO	Flower	3000.0	40000.0	0.91	*
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FARNESENE	Flower	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
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Activities (2)					
Pesticide					
Pheromone	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.				

FLAVONOIDS	Flower	--	--		Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
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GAMMA-CADINENE	Flower	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
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GERANIAL	Flower	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
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Activities (13)					
AntiEBV IC50=16 uM					
Antiaflatoxin					
Antibacterial					Onawunmi, G.O., Yisak, W-A., Ogunlana,* E.O. 1984. Antibacterial Constituents In The Essential Oil Of Cymbopogon citratus (DC.) Stapf. Journal of Ethnopharmacology, 12: 279-286, 1984.
Antitumor (Colon)					
Antitumor (Skin)					
Antiviral IC50=16 uM					
Antiyeast					
Chemopreventive					
Estrogenic					
Fungicide					
Glutathionigenic					
Pesticide					
Spasmolytic					

GERANIOL	Flower	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
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Activities (35)

Allergenic	
Anthelmintic	Madaus, G. 1976. Lehrbuch der Biologischen Hilfsmittel. Vol., 1-3. 2862 pp. (+ 144 p. index). Georg Olms Verlag, Hildesheim. Reprint of 1938 Madaus.
Antibacterial MIC=400 ug/ml	Muroi, H. and Kubo, I. 1993. Combination Effects of Antibacterial Compounds in Green Tea Flavor against Streptococcus mutans. J. Agric. Food Chem. 41: 1102-1105.
Antibacterial MIC=64 ug/ml	
Antibacterial MBC=800 ug/ml	
Anticancer (Pancreas) IC50=265 uM	
Anticarcinogenic MIC=400 ug/ml	Muroi, H. and Kubo, I. 1993. Combination Effects of Antibacterial Compounds in Green Tea Flavor against Streptococcus mutans. J. Agric. Food Chem. 41: 1102-1105.
Antimelanomic IC50=150 uM/l	
Antisalmonella MIC=400 ug/ml	
Antiseptic 7 x phenol	Wagner & Wolff, eds. 1977. New Natural Products (RS164. I56. 176)
Antiseptic MIC=64 ug/ml	
Antiseptic 400-800 ug/ml	
Antispasmodic	Buchbauer, G., Jirovetz*, L., Nikiforov, A., Remberg, G., Raverdino, V. 1989. Headspace-Analysis and Aroma Compounds of Austrian Hay-Blossoms (Flores Graminis, Graminis Flos) used in Aromatherapy. J. Ess. Oil Res., 2: 185-191, 1990.
Antitubercular MIC=64 ug/ml	
Antitumor	Yu, S.G., Anderson, P.J., and Elson, C.E. 1995. Efficacy of B-Ionone in the Chemoprevention of Rat Mammary Carcinogenesis. J. Agric. Food Chem. 43: 2144-2147.
Antitumor (Pancreas) IC50=265 uM	
Ascaricide	Madaus, G. 1976. Lehrbuch der Biologischen Hilfsmittel. Vol., 1-3. 2862 pp. (+ 144 p. index). Georg Olms Verlag, Hildesheim. Reprint of 1938 Madaus.
CNS-Stimulant	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Cancer-Preventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.
Candidicide	
Embryotoxic	
Emetic 3 x ipecac	Lawrence Review of Natural Products, Sep-97.
Expectorant	Madaus, G. 1976. Lehrbuch der Biologischen Hilfsmittel. Vol., 1-3. 2862 pp. (+ 144 p. index). Georg Olms Verlag, Hildesheim. Reprint of 1938 Madaus.
FLavor FEMA 1-10	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry
Fungicide IC93=2 mM	Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology, v. 4, Oryx Press, Phoenix, 1989, 267pp.
Herbicide IC100-2,000 uM	Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp.
Insectifuge 50 ppm	
Insectiphile	Merck 11th Edition
Mycobactericide MIC=64 ug/ml	
Nematicide IC86=100 ug/ml	Nigg, H.N. and Seigler, D.S., eds. 1992. Phytochemical Resources for Medicine and Agriculture. Plenum Press, New York. 445 pp.
Nematicide MLC=1,000 ug/ml	Shoyakugaku Zasshi, 44: 183.
Perfumery	Merck 11th Edition
Pesticide	
Sedative	
Trichomonicide LD100=300 ug/ml	

GERANYL-BUTYRATE Flower -- -- Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Activities (3)

FLavor FEMA 1-10	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry
Perfumery	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry
Sedative	Zebovitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. Compendium of Safety Data Sheets for Research and Industrial Chemicals. VCH Publishers, New York. 3560-4253.

GERANYL-CAPROATE Flower -- -- Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Activities (2)

FLavor FEMA 1-3	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry
Perfumery	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry

GERANYL-ISOBUTYRATE	Flower	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
GERANYL-VALERATE	Flower	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
HERNIARIN	Plant	20.0	250.0	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Activities (12)

Aldose-Reductase-Inhibitor 10 ug/ml cow (weak activity)	Okada,Y,et al.1995.Search for Naturally Occurring Substances to Prevent the Complications of Diabetes.II.Inhibitory Effect of Coumarin and Flavonoid Derivatives on Bovine Lens Aldose Reductase and Rabbit Platelet Aggregation.Chem Pharm Bull43(8):1385-1387			
Allergenic	Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.			
Antiallergic	Lawrence Review of Natural Products, Mar-91.			
Antibacterial 100 ppm				
Antispasmodic				
Antistaphylococcic				
Candidicide 100 ppm				
Cholagogue	Fitoterapia No.5-1986.			
Fungicide 100 ppm				
Hepatoprotective	Yakhak Hoeji, 37: 182, 1993.			
Pesticide				
Photoactive				

ISOBUTYRIC-ACID	Flower	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
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Activities (2)

Irritant				
Transdermal	Zebovitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. Compendium of Safety Data Sheets for Research and Industrial Chemicals. VCH Publishers, New York. 3560-4253.			

ISOVALERALDEHYDE	Flower	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
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Activities (1)

FLavor FEMA 0.5-5	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry			
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LAVANDULOL	Flower	--	--	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
LAVANDULYL-ACETATE	Flower	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
LIMONENE	Flower	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Activities (60)

AChE-Inhibitor	Grundy, D. L. and Still, C. C., Inhibition of acetylcholinesterases by pulegone-1,2-epoxide, <i>Oest. Biochem. & Physiol.</i> , 23, 1985, 383-8.
Acaricide LC100=8 uM	
Allelochemic	
Allergenic 1/20th carene	
Antiacetylcholinesterase IC22-26=1.2 mM	
Antiadenomic	
Antialzheimeran?	Grundy, D. L. and Still, C. C., Inhibition of acetylcholinesterases by pulegone-1,2-epoxide, <i>Oest. Biochem. & Physiol.</i> , 23, 1985, 383-8.
Antiasthmatic	
Antibacterial	Revista Itiliana Eppos, 12: 5, 1994.
Anticancer	
Antiesophagitic	
Antifeedant	
Antiflu	Economic & Medicinal Plant Research, 5: 195.
Antiinflammatory	
Antilithic	
Antilymphomic	
Antimetastatic (Stomach)	
Antimutagenic	Economic & Medicinal Plant Research, 6: 235.
Antiobesity	
Antiseptic	
Antispasmodic ED50=0.197 mg/ml	Fitoterapia No.59-1984.
Antitumor	
Antitumor (Breast)	
Antitumor (Colon)	
Antitumor (Pancreas)	
Antitumor (Prostate)	
Antitumor (Stomach)	
Antiviral	
Apoptotic	
Bronchoprotectant	
Cancer-Preventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.
Candidistat	
Chemopreventive	
Cholesterolytic	
Detoxicant	
Enterocontractant	J. Aromatherapy 4: 22.
Expectorant	
FLavor	
Fungiphilic	J. Agric. Food Chem. 43: 2283.
Fungistat	
GST-Inducer	
Herbicide IC50=45 uM	Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp.
Histaminic	
Immunomodulator	
Insecticide 0.37 uM/fly	
Insectifuge	Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990.
Interleukin-6-Inhibitor	
Irritant	
Lipolytic	
Myorelaxant 50 mg/kg	
NO-Genic	
Nematicide IC=100 ug/ml	Nigg, H.N. and Seigler, D.S., eds. 1992. Phytochemical Resources for Medicine and Agriculture. Plenum Press, New York. 445 pp.
Ornithine-Decarboxylase-Inhibitor ~750 mg/kg (diet)	
Ozone-Scavenger	
P450-Inducer	
Peristaltic	
Pesticide	
Photosensitizer	Rinzler, C. A. 1990. The Complete Book of Herbs, Spices and Condiments. Facts on File, New York. 199 pp.
Sedative ED=1-32 mg/kg	Wagner & Wolff, eds. 1977. New Natural Products (RS164. I56. 176)
Transdermal	

LINALOL	Plant	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
LINALOL-OXIDE	Flower	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
LINALOOL	Flower	2000.0	10500.0	1.73	*

Activities (53)

Acaricide C90=<15 ul/l (= <15 ppm)	
Allergenic	
Analgesic	
Anesthetic 0.01-1 ug/ml	
Antiacetylcholinesterase	
Antiallergic	Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp.
Antianaphylactic	
Antibacterial MIC=1,600 ug/ml	
Anticarcinogenic MIC=1,600 ug/ml	Muroi, H. and Kubo, I. 1993. Combination Effects of Antibacterial Compounds in Green Tea Flavor against Streptococcus mutans. J. Agric. Food Chem. 41: 1102-1105.
Anticolic	
Anticonvulsant 200 mg/kg ipr mus	
Antiedemic	
Antiglutamaergic	
Antihistaminic	Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp.
Antiinflammatory	
Antileukemic IC50=3.5-4.2 ug/ml	Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. Am J Chin Med, 31(1):37-46.
Antilymphomic IC50=3.5-4.2 ug/ml	Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. Am J Chin Med, 31(1):37-46.
Antimange	
Antimite	
Antimutagenic	
Antiseptic 5 x phenol	Wagner & Wolff, eds. 1977. New Natural Products (RS164. I56. 176)
Antishock	Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp.
Antispasmodic	Buchbauer, G., Jirovetz*, L., Nikiforov, A., Remberg, G., Raverdino, V. 1989. Headspace-Analysis and Aroma Compounds of Austrian Hay-Blossoms (Flores Graminis, Graminis Flos) used in Aromatherapy. J. Ess. Oil Res., 2: 185-191, 1990.
Antiviral	
Barbituate-Synergist	
Bronchorelaxant	Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp.
CNS-Depressant	
Cancer-Preventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.
Candidistat	
Carminative	
Culicide LC50=156-194 mg/l	
Cytotoxic	
Expectorant	Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp.
FLavor FEMA 2-40	Aloe Research Council - Duke writeup of non-peer reviewed book by Coats and draft by Henry
Fungicide	Acta Botanica Sinica, 32: 49.
GABA-nergic	
Hypnotic	
Hypothermic	
Insecticide LC50=156-194 mg/l	
Insectifuge	Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990.
Irritant	Zebovitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. Compendium of Safety Data Sheets for Research and Industrial Chemicals. VCH Publishers, New York. 3560-4253.
Larvicide LC50=156-194 mg/l	
Mosquitofuge > Deet	
Motor-Depressant	Buchbauer et al, e.g.Buchbauer et al,1993.Therapeutic properties of essential oils and fragrances. Chap.12 in Teranishi,R, Buttery,R.G and Sugisawa,H. Eds. Bioactive Volatile Compounds from Plants. ACS Symposium Series 525. Amer. Chem. Soc., Washington DC
Nematicide MLC=1 mg/ml	Shoyakugaku Zasshi, 44: 183.
Perfumery	Merck 11th Edition
Pesticide	
Prooxidant	Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
Sedative ED=1-32 mg/kg	Wagner & Wolff, eds. 1977. New Natural Products (RS164. I56. 176)
Sedative 200 mg/kg ipr mus (1% as active as diazepam)	
Termitifuge	Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990.
Trichomonicide LD100=600 ug/ml	
Tumor-Promoter	

LINALOOL-OXIDE	Flower	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
LINALYL-ACETATE	Flower	240.0	16500.0	2.0	*

Activities (7)Anesthetic 0.01-1
ug/mlAntioxidant 400
ppmAntispasmodic
ED50=0.21
mg/ml

Fitoterapia No.59-1984.

FLavor FEMA 2-15 Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry

Motor-Depressant Buchbauer et al, e.g.Buchbauer et al,1993.Therapeutic properties of essential oils and fragrances. Chap.12 in Teranishi,R, Buttery,R.G and Sugisawa,H. Eds. Bioactive Volatile Compounds from Plants. ACS Symposium Series 525. Amer. Chem. Soc., Washington DC

Perfumery Merck 11th Edition

Sedative

LINALYL-BUTYRATE	Flower	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
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LINALYL-CAPROATE	Flower	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
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Activities (2)

FLavor FEMA 3-15 Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry

Perfumery Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry

LINALYL-ISOBUTYRATE	Flower	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
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LINALYL-VALERATE	Flower	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
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LUTEOLIN	Plant	--	--	Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
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Activities (78)

Aldose-Reductase-Inhibitor EC=3 ppm Shin*, K.H., Chung, M.S., Chae, Y.J., Yoon, K.Y., Cho, T.S. 1992. A survey for aldose reductase inhibition of herbal medicines. Fitoterapia 64(2): 130, 1993.

Aldose-Reductase-Inhibitor IC50=0.45 uM
rat

AntiHIV

Antiallergic

Antiangiogenic IC60-75=10 uM

Antiatherogenic

Antibacterial MIC=500
ug/ml

Planta Medica, 57: A43, 1991.

Anticarcinogenic

Anticarcinomic

Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. Am J Chin Med, 31(1):37-46.

Anticataract EC=3 ppm

Shin*, K.H., Chung, M.S., Chae, Y.J., Yoon, K.Y., Cho, T.S. 1992. A survey for aldose reductase inhibition of herbal medicines. Fitoterapia 64(2): 130, 1993.

Anticomplementary

Antidermatic

Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.

Antiestrogenic

Antifeedant IC52=<1,000
ppm diet

Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology, v. 4, Oryx Press, Phoenix, 1989, 267pp.

Antiherpetic 11-23 ug/ml

Antihistaminic <10-15 uM

Antiinflammatory #NAME?

Wichtl, M. 1984. Teedrogen. Ein Handbuch fur Apotheker und Arzte. Wissenschaftliche Verlagsgesellschaft. mbH Stuttgart. 393 pp.

Antileukemic 20-50 uM

Antilymphomic

Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. Am J Chin Med, 31(1):37-46.

Antimelanomic

Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. Am J Chin Med, 31(1):37-46.

Antimutagenic ID50=2-5
nMAntimutagenic ID50=0.44
ug/ml

Antinociceptive

Antioxidant IC50=10 uM

Antipolio

Economic & Medicinal Plant Research, 5: 197.

Antiproliferant

Antispasmodic

Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.

Antitumor 1-50 uM

Antitumor (Colon)

Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. Am J Chin Med, 31(1):37-46.

Antitumor (Kidney)	Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. Am J Chin Med, 31(1):37-46.
Antitumor (Lung)	Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. Am J Chin Med, 31(1):37-46.
Antitumor (Ovary)	Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. Am J Chin Med, 31(1):37-46.
Antitumor (Pancreas)	Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. Am J Chin Med, 31(1):37-46.
Antitumor (Skin) 20 uM	
Antitumor (Stomach)	Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. Am J Chin Med, 31(1):37-46.
Antitumor (Thyroid) 12-50 uM	
Antitumor (brain)	Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. Am J Chin Med, 31(1):37-46.
Antitussive	
Antiviral 11-23 ug/ml	
Aphidifuge	
Apoptotic 12-50 uM	
Aromatase-Inhibitor IC35=1 uM/l	Journal of Medicinal Food 2: 235.1999.
Beta-Glucuronidase-Inhibitor IC50=40 uM	
Calcium-Antagonist IC50=1.2 uM fbt	
Cancer-Preventive	
Chemopreventive	
Choleretic	
Cytotoxic 1-50 uM	
Deiodinase-Inhibitor	Jim Duke's personal files.
Differentiator IC>40=40 uM	
Diuretic	Jim Duke's personal files.
Estrogenic 58% genistein	
Hepatoprotective	
Hyaluronidase-Inhibitor IC50+=100-250 uM	
Hypocholesterolemic	
ICAM-1-Inhibitor	
IKK-Inhibitor	
Iodothyronine-Deiodinase-Inhibitor	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Lipoxygenase-Inhibitor	
MAPK-Inhibitor	
MMP-9-Inhibitor 20 uM	
Metalloproteinase-Inhibitor	
Myorelaxant	
NEP-Inhibitor IC50=>42 uM	
NF-kB-Inhibitor	
NO-Inhibitor	
PTK-Inhibitor 10-100 uM	
Pesticide	
Proliferant	
Prostaglandin-Synthetase-Inhibitor	
Protein-Kinase-C-Inhibitor IC70=50 uM	
Succinoxidase-Inhibitor	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
TNF-alpha-Inhibitor IC50=14.44 uM	
Topoisomerase-I-Inhibitor	Santti, R., Makela, S., Strauss, L., Korman, J., Kostian, M. L. 1998. Phytoestrogens: Potential Endocrine Disruptors in Males. Toxicol Ind Health, 14: 223-237.
VEGF-Inhibitor IC50=2-7 uM	
Vasodilator	
Xanthine-Oxidase-Inhibitor IC50=0.11 ug/ml	Chem. & Pharm. Bull. 38: 1772.
iNOS-Inhibitor	

MYRCENE

Flower -- --

Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Activities (22)

ACE-Inhibitor 100 ug/ml

Aldose-Reductase-Inhibitor 100 ug/ml Okamura, K., Iwakami, S., Matsunaga, T. 1992. Biological Activity of Monoterpenes from Trees. Toyama-Ken Yakuji Kenkyusho Nenpo, (20): 95-101.

Allergenic

Analgesic Kauderer, B., Zamith, H., Paumgartten, F.J.R., and Speit, G. Evaluation of the Mutagenicity of B-Myrcene in Mammalian Cells In Vitro. Environmental and Molecular Mutagenesis 18: 28-34, 1991.

Antibacterial

Anticonvulsant

Antimutagenic Kauderer, B., Zamith, H., Paumgartten, F.J.R., and Speit, G. Evaluation of the Mutagenicity of B-Myrcene in Mammalian Cells In Vitro. Environmental and Molecular Mutagenesis 18: 28-34, 1991.

Antinitrosaminic

Antinociceptive 10-20 mg/kg ipr mus Rao, V.S.N., Menezes, A.M.S., Viana, G.S.B. 1990. Effect of myrcene on nociception in mice. J. Pharm. Pharmacol. 42: 877-878, 1990.

Antinociceptive 20-40 mg/kg scu mus Rao, V.S.N., Menezes, A.M.S., Viana, G.S.B. 1990. Effect of myrcene on nociception in mice. J. Pharm. Pharmacol. 42: 877-878, 1990.

Antioxidant Jim Duke's personal files.

Antispasmodic Jim Duke's personal files.

Chemopreventive Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.

FLavor FEMA 0.5-9 Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry

Fungicide Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp.

Hypothermic

Insectifuge

Irritant Zebovitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. Compendium of Safety Data Sheets for Research and Industrial Chemicals. VCH Publishers, New York. 3560-4253.

Myorelaxant 100-200 mg/kg

P450-2B1-Inhibitor IC50=0.14 uM

Perfumery Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.

Pesticide

NERAL	Flower	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
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Activities (4)

Antibacterial Iwu, M.M. 1993. Handbook of African Medicinal Plants. CRC Press, Boca Raton, FL 435 pp.

Antispasmodic

Pesticide

Termiticide LD100=5 mg/g

OCIMENE	Flower	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
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Activities (2)

Insecticide Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.

Perfumery Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry

PHYTOSTEROLS	Flower	--	--	Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
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Activities (2)

Antiprostatotic

Hypocholesterolemic

PLANTEOSE	Seed	--	--	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
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ROSMARINIC-ACID	Plant	--	12000.0	-1.0	Fitoterapia No.62: 166.
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Activities (57)

ABeta-Inhibitor

Adenylate-Cyclase-Inhibitor

Aldose-Reductase-Inhibitor

AntiHIV EC50=40 ug/ml

Antiaggregant Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.

Antiallergic

Antialzheimeran

Antianaphylactic 1-100 mg/kg orl Int. J. Immunopharmacology. Vol 10: 729, 1988.

Antianaphylactic ID50=1 mg/kg ivn rat	
Antianaphylactic ID50=10 mg/kg ims rat	
Antiatherosclerotic IC50=0.74 uM	
Antibacterial	Planta Medica, 55: 663.
Anticoagulant	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
Anticomplementary 1/2 aspirin	
Anticomplementary 20 mg/kg ivn	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
Antidepressant	
Antiedemic 0.316-3.16 mg/kg ims	Int. J. Immunopharmacology. Vol 10: 729, 1988.
Antigonadotropic	
Antihemolytic IC70=5-10 um/l	Int. J. Immunopharmacology. Vol 10: 729, 1988.
Antihepatotoxic	
Antitherpetic 50 ug/ml	Vlietinck, A.J. and Dommissie, R.A. eds. 1985. Advances in Medicinal Plant Research. Wiss. Verlag. Stuttgart.
Antitherpetic EC50=20 ug/ml	
Antihyperthyroid	
Antiinflammatory IC~58=1,000 uM	
Antiintegrase 10 ug/ml	
Antileukotriene	
Antilipoperoxidant	
Antimutagenic	
Antinephritic	
Antioxidant EC50=2.7 ug/ml	Parveen, N. 1991. Antifilarial Activity of Vitex negundo Against Setaria cervi. Fitoterapia, 62(2): 163, 1991.
Antioxidant 10 uM	
Antioxidant (LDL) IC50=0.74 uM	
Antiplateque	
Antiproliferant	
Antiprostaglandin 20 mg/kg ivn	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
Antiproteolytic IC50=0.9 mol l	Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin.
Antipulmonotic	Tyler, V.E.. 1994.
Antiradicular	
Antishock	Int. J. Immunopharmacology. Vol 10: 735, 1988.
Antithyreotropic	
Antithyroid	Jim Duke's personal files.
Antiuremic	
Antiviral EC50=40 ug/ml	
Anxiolytic	
Apoptotic	
COX-1-Inhibitor IC58=1,000 uM	
COX-2-Inhibitor IC>58=1,000 uM	
Calcium-Antagonist IC50=1.2 uM fbt	
Cancer-Preventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.
Cytotoxic TC50=100-150 ug/ml	
Deiodinase-Inhibitor	Jim Duke's personal files.
Immunomodulator	
Immunostimulant	
Lipoxygenase-Inhibitor	
Neuroprotective	
Pesticide	
Radioprotective	

SABINENE Flower -- -- Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Activities (5)

Antibacterial
 Antihelicobacter
 Antiseptic
 Antiulcer
 Perfumery

Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry

TANNIN

Flower 50000.0 120000.0 0.53 *

Activities (35)

Anthelmintic
 AntiHIV
 Antibacterial
 Anticancer
 Anticariogenic
 Antidiarrheic
 Antidysenteric
 Antihepatotoxic
 Antihypertensive
 Antilipolytic
 Antimutagenic
 Antinephritic
 Antiphidic
 Antioxidant
 IC50=1.44 ug/ml
 Antioxidant 1/3
 quercetin
 Antiradicular 500
 mg/kg/day orl mus
 Antiradicular 1/3
 quercetin
 Antirenitic
 Antitumor
 Antitumor-Promoter
 Antiulcer
 Antiviral
 Cancer-Preventive
 Carcinogenic
 Chelator
 Cyclooxygenase-
 Inhibitor
 Glucosyl-
 Transferase-Inhibitor
 Hepatoprotective
 Immunosuppressant
 Lipoxigenase-
 Inhibitor
 MAO-Inhibitor
 Ornithine-
 Decarboxylase-
 Inhibitor
 Pesticide
 Psychotropic
 Xanthine-Oxidase-
 Inhibitor

Uchida, U., Ohta, H., Niwa, M., Mori, A., Nonaka, G-i., Nishioka, I., and Zaki, M. 1989. Prolongation of Life Span of Stroke-Prone Spontaneously Hypertensive Rats (SHRSP) Ingesting Persimmon Tannin. Chem. Pharm. Bull. 38(4): 1049-1052, 1990.

Economic & Medicinal Plant Research, 5: 363.

Uchida, U., Ohta, H., Niwa, M., Mori, A., Nonaka, G-i., Nishioka, I., and Zaki, M. 1989. Prolongation of Life Span of Stroke-Prone Spontaneously Hypertensive Rats (SHRSP) Ingesting Persimmon Tannin. Chem. Pharm. Bull. 38(4): 1049-1052, 1990.

Uchida, U., Ohta, H., Niwa, M., Mori, A., Nonaka, G-i., Nishioka, I., and Zaki, M. 1989. Prolongation of Life Span of Stroke-Prone Spontaneously Hypertensive Rats (SHRSP) Ingesting Persimmon Tannin. Chem. Pharm. Bull. 38(4): 1049-1052, 1990.

HerbalGram No. 22 - Spring 1990, page 14.

Uchida, U., Ohta, H., Niwa, M., Mori, A., Nonaka, G-i., Nishioka, I., and Zaki, M. 1989. Prolongation of Life Span of Stroke-Prone Spontaneously Hypertensive Rats (SHRSP) Ingesting Persimmon Tannin. Chem. Pharm. Bull. 38(4): 1049-1052, 1990.

TANNIN

Plant -- 120000.0 0.53 List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Activities (35)

Anthelmintic

AntiHIV

Antibacterial

Anticancer

Anticariogenic

Antidiarrheic

Antidysenteric

Antihepatotoxic

Antihypertensive

Antilipolytic

Antimutagenic

Antinephritic

Uchida, U., Ohta, H., Niwa, M., Mori, A., Nonaka, G-i., Nishioka, I., and Zaki, M. 1989. Prolongation of Life Span of Stroke-Prone Spontaneously Hypertensive Rats (SHRSP) Ingesting Persimmon Tannin. Chem. Pharm. Bull. 38(4): 1049-1052, 1990.

Antiphidic

Economic & Medicinal Plant Research, 5: 363.

Antioxidant
IC50=1.44 ug/mlAntioxidant 1/3
quercetinAntiradicular 500
mg/kg/day orl mus

Uchida, U., Ohta, H., Niwa, M., Mori, A., Nonaka, G-i., Nishioka, I., and Zaki, M. 1989. Prolongation of Life Span of Stroke-Prone Spontaneously Hypertensive Rats (SHRSP) Ingesting Persimmon Tannin. Chem. Pharm. Bull. 38(4): 1049-1052, 1990.

Antiradicular 1/3
quercetin

Antirenitic

Uchida, U., Ohta, H., Niwa, M., Mori, A., Nonaka, G-i., Nishioka, I., and Zaki, M. 1989. Prolongation of Life Span of Stroke-Prone Spontaneously Hypertensive Rats (SHRSP) Ingesting Persimmon Tannin. Chem. Pharm. Bull. 38(4): 1049-1052, 1990.

Antitumor

Antitumor-Promoter

Antiulcer

Antiviral

Cancer-Preventive

HerbalGram No. 22 - Spring 1990, page 14.

Carcinogenic

Chelator

Cyclooxygenase-
InhibitorGlucosyl-
Transferase-Inhibitor

Hepatoprotective

Immunosuppressant

Lipoxygenase-
Inhibitor

MAO-Inhibitor

Ornithine-
Decarboxylase-
Inhibitor

Pesticide

Psychotropic

Uchida, U., Ohta, H., Niwa, M., Mori, A., Nonaka, G-i., Nishioka, I., and Zaki, M. 1989. Prolongation of Life Span of Stroke-Prone Spontaneously Hypertensive Rats (SHRSP) Ingesting Persimmon Tannin. Chem. Pharm. Bull. 38(4): 1049-1052, 1990.

Xanthine-Oxidase-
Inhibitor

UMBELLIFERONE

Plant

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Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.

Activities (22)

Aldose-Reductase-Inhibitor IC50=4.8 ug/ml cow	Okada, Y. et al. 1995. Search for Naturally Occurring Substances to Prevent the Complications of Diabetes. II. Inhibitory Effect of Coumarin and Flavonoid Derivatives on Bovine Lens Aldose Reductase and Rabbit Platelet Aggregation. <i>Chem Pharm Bull</i> 43(8):1385-1387
Allelochemic IC94=2 mM	Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, <i>Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology</i> , v. 4, Oryx Press, Phoenix, 1989, 267pp.
Antibacterial	Jeffery B., Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp.
Antiedemic	Neuwinger, H. D. 1996. <i>African Ethnobotany - Poisons and Drugs</i> . Chapman & Hall, New York. 941 pp.
Antihistaminic	
Antiinflammatory	
Antimitotic 5-25 ug/ml	Gawron, A. and Glowniak, K. 1987. Cytostatic Activity of Coumarins in vitro. <i>Planta Medica</i> 1987: 526.
Antimutagenic	Economic & Medicinal Plant Research, 6: 235.
Anti prostaglandin	
Antiseptic	
Antispasmodic	
Antistaphylococcic	
Cancer-Preventive 5-25 ug/ml	Gawron, A. and Glowniak, K. 1987. Cytostatic Activity of Coumarins in vitro. <i>Planta Medica</i> 1987: 526.
Candidicide	
Choleretic	
Fungicide	Williamson, E. M. and Evans, F. J., <i>Potter's New Cyclopaedia of Botanical Drugs and Preparations</i> , Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.
Lipoxygenase-Inhibitor	
Perfumery	Aloe Research Council - Duke writeup of non-peer reviewed book by Coats and draft by Henry
Pesticide	
Photoactive	
Sunscreen	Merck 11th Edition
Xanthine-Oxidase-Inhibitor	Mills, Simon and Bone, Kerry. 2000. <i>Phytotherapy</i> . Churchill Livingstone, Edinburgh.

UMBELLIFERONE-METHYL-ETHER	Plant	--	--		List, P.H. and Horhammer, L., <i>Hager's Handbuch der Pharmazeutischen Praxis</i> , Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
URSOLIC-ACID	Leaf	--	7000.0	-0.26	List, P.H. and Horhammer, L., <i>Hager's Handbuch der Pharmazeutischen Praxis</i> , Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Activities (89)

Analgesic	
AntiEBV	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. <i>Herbal Medicine - A Guide for Health-care Professionals</i> . The Pharmaceutical Press, London. 296pp.
AntiHIV EC50=2.0 ug/ml	Kashiwada, Y., et. al. 1998. Anti-AIDS Agents. 30. Anti-HIV Activity of Oleanolic Acid, Pomolic Acid, and Structurally Related Triterpenoids. <i>J. Nat. Prod.</i> , 61 (9): 1090-1095.
AntiHIV IC50=6.5 ug/ml	Kashiwada, Y., et. al. 1998. Anti-AIDS Agents. 30. Anti-HIV Activity of Oleanolic Acid, Pomolic Acid, and Structurally Related Triterpenoids. <i>J. Nat. Prod.</i> , 61 (9): 1090-1095.
AntiHIV IC85=18 ug/ml	
AntiHIV 6.7 uM	
AntiTGF-beta IC50=6-7.5 uM	
Antialzheimeran	Ringbom, T., Seguar, L., Noreen, Y., Perera, P., Bohlin, L. 1998. Ursolic Acid from <i>Plantago major</i> , a Selective Inhibitor of Cyclooxygenase-2 Catalyzed Prostaglandin Biosynthesis. <i>J. Nat. Prod.</i> , 61(10): 1212-1215.
Antiarrhythmic	
Antiartritic	<i>Planta Medica</i> , 57: A56, 1991.
Antibacterial	
Anticancer	Ringbom, T., Seguar, L., Noreen, Y., Perera, P., Bohlin, L. 1998. Ursolic Acid from <i>Plantago major</i> , a Selective Inhibitor of Cyclooxygenase-2 Catalyzed Prostaglandin Biosynthesis. <i>J. Nat. Prod.</i> , 61(10): 1212-1215.
Anticancer (Colon)	Ringbom, T., Seguar, L., Noreen, Y., Perera, P., Bohlin, L. 1998. Ursolic Acid from <i>Plantago major</i> , a Selective Inhibitor of Cyclooxygenase-2 Catalyzed Prostaglandin Biosynthesis. <i>J. Nat. Prod.</i> , 61(10): 1212-1215.
Anticarcinomic	Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46.
Anticariogenic	Leung, A. Y. and Foster, S. 1995. <i>Encyclopedia of Common Natural Ingredients</i> 2nd Ed. John Wiley & Sons, New York. 649 pp.
Anticholestatic 28-100 mg/kg orl	Shukla, B., Visen, P.K.S., Patnaik, G.K., Tripathi, S.C., Srimal, R.C., Dayal, R., and Dobhal, P.C. Hepatoprotective Activity in the Rat of Ursolic Acid Isolated from <i>Eucalyptus Hybrid</i> . <i>Phytotherapy Research</i> 6: 74-79, 1992.
Anticomplement IC100 0.1 mM/l gpg	Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. <i>Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D)</i> , 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin.
Anticomplement IC80-90 0.05 mM/l gpg	Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. <i>Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D)</i> , 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin.
Antidiabetic	<i>Chemical Constituents of Oriental Herbs</i> (3 diff. books)
Antiedemic	
Antiescherichic	
Antifibrosarcomic IC80=10 uM	
Antihapatotoxic 5-20 mg/kg ipr	Shukla, B., Visen, P.K.S., Patnaik, G.K., Tripathi, S.C., Srimal, R.C., Dayal, R., and Dobhal, P.C. Hepatoprotective Activity in the Rat of Ursolic Acid Isolated from <i>Eucalyptus Hybrid</i> . <i>Phytotherapy Research</i> 6: 74-79, 1992.
Antihistaminic	Tsuruga, T., Chun, Y.-T., Ebizuka, Y., and Sankawa, U. 1991. Biologically Active Constituents of <i>Melaleuca leucadendron</i> : Inhibitors of Induced Histamine Release from Rat Mast Cells. <i>Chem. Pharm. Bull.</i> 39(12): 3276-3278, 1991.

Antihyperlipidemic	
Antiinflammatory 1/3 indomethacin	
Antiinflammatory IC24=500 mg/kg	
Antileishmanic ED50=20 uM	
Antileukemic IC50=2.5-17.8 ug/ml	
Antilymphomic	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
Antimalarial IC50=28-37 ug/ml	
Antimetastatic IC80=10 uM	
Antimutagenic IC57-80=80 mg/kg	
Antinephritic IC50=6-7.5 uM	
Antioesity?	Internat. J. Oriental Med. 16: 4.
Antioxidant IC50=10 uM	
Antiperoxidant IC35=200 ug/ml	
Antiplasmodial IC50=28-37 ug/ml	
Antiproliferative IC50=15-20 uM	
Antistaphylococcic	
Antithromboxane IC50=50 uM	
Antitrypanosomic	
Antitumor	Cancer Research, 54: 701, 1994.
Antitumor (Breast) 0.5% diet	
Antitumor (Breast) IC50=15-20 uM	
Antitumor (Cervix)	Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. Am J Chin Med, 31(1):37-46.
Antitumor (Colon)	
Antitumor (Lung)	
Antitumor (Ovary)	Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. Am J Chin Med, 31(1):37-46.
Antitumor (Stomach) IC50=15-20 uM	
Antitumor (brain)	Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. Am J Chin Med, 31(1):37-46.
Antitumor-Promoter	Planta Medica, 57: A56, 1991.
Antiulcer	Shukla, B., Visen, P.K.S., Patnaik, G.K., Tripathi, S.C., Srimal, R.C., Dayal, R., and Dobhal, P.C. Hepatoprotective Activity in the Rat of Ursolic Acid Isolated from Eucalyptus Hybrid. Phytotherapy Research 6: 74-79, 1992.
Antiviral IC85=18 ug/ml	
Aromatase-Inhibitor	
Beta-Blocker	
Beta-Glucuronidase-Inhibitor ~100 mg/kg	
CNS-Depressant	
COX-2-Inhibitor IC50=130 uM/	
Cancer-Preventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.
Candidicide	
Cardioprotective	
Cardiotonic	
Choleretic 5-20 mg/kg orl	Shukla, B., Visen, P.K.S., Patnaik, G.K., Tripathi, S.C., Srimal, R.C., Dayal, R., and Dobhal, P.C. Hepatoprotective Activity in the Rat of Ursolic Acid Isolated from Eucalyptus Hybrid. Phytotherapy Research 6: 74-79, 1992.
Cyclooxygenase-Inhibitor	Ringbom, T., Seguar, L., Noreen, Y., Perera, P., Bohlin, L. 1998. Ursolic Acid from Plantago major, a Selective Inhibitor of Cyclooxygenase-2 Catalyzed Prostaglandin Biosynthesis. J. Nat. Prod., 61(10): 1212-1215.
Cytotoxic 50 ppm	
Cytotoxic ED50=3.75 ug/ml	
Cytotoxic 7.2 uM	
Diuretic	
Elastase-Inhibitor IC50=~15 uM	
Hepatoprotective 1-100 ug/ml	
Hepatoprotective 10 mg/kg	
Hypoglycemic	Ivorra, M.D., Paya, M., and Villar, A. 1989. A Review of Natural Products and Plants as Potential Antidiabetic Drugs. Journal of Ethnopharmacology, 27: 243-275, 1989.
Hypotensive	
Immunomodulator	
Leucocytogenic	

Lipoxygenase-Inhibitor
IC50=0.18 mM

MMP-9-Inhibitor IC80=10
uM

Ornithine-Decarboxylase-
Inhibitor

Pesticide

Piscicide

Potassium-Sparing 3
mg/rat

Iwu, M.M. 1993. Handbook of African Medicinal Plants. CRC Press, Boca Raton, FL 435 pp.

Protease-Inhibitor
IC85=18 ug/ml

Protistocide

Chemical Express, 7: 285, 1992.

Quinone-Reductase-
Inducer 5 ug/ml

Lee, S. K., Song, Y., Mata-Greenwood, E., Kelloff, G. J., Steele, V. E., Pezzuto, J. M. 1999. Modulation of in vitro Biomarkers of the Carcinogenic Process by Chemopreventive Agents. Anticancer Res., 19: 35-44.

Sodium-Sparing 3 mg/rat

Iwu, M.M. 1993. Handbook of African Medicinal Plants. CRC Press, Boca Raton, FL 435 pp.

TOPO-2-Inhibitor

Trypanocide

Vasopressor

VALERALDEHYDE

Flower

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Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

VALERIC-ACID

Flower

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Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Activities (9)

Antihysteria

Martindale's 28th

Antiinsomniac 1.2-2.4

Antispasmodic

FLavor FEMA 1-8

Aloe Research Council - Duke writeup of non-peer reviewed book by Coats and draft by Henry

Hypotensive

Myorelaxant

Perfumery

Merck 11th Edition

Sedative

Tranquilizer