

List of All Chemicals

P Acacia catechu (Fabaceae)

Common name(s)

Catechu; Black Cutch

How used

Medicinal

*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 parts ... ▾	Low PPM	High PPM	StdDev	*Reference
(+)-AFZELICHIN	Plant		--	--		*
(-)-ACACATECHIN	Plant		--	--		*
(-)-EPICATECHOL	Plant		--	--		*
3-(BETA-L-ARABOPYRANOSIDE)-L-ARABINOSE	Plant		--	--		*
3-METHOXYFLAVONES	Plant		--	--		*
4-(4-O-METHYL-ALPHA-D-GLUCURONOSIDE)-L-ARABINOSE	Plant		--	--		*
4-HYDROXY-PIPECOLIC-ACID	Plant		--	--		*
5-(BETA-D-XYLOPYRANOSIDE)-L-ARABINOSE	Plant		--	--		*
7,3',4'-TRIHYDROXY-8-METHOXYFLAVONOL	Plant		--	--		*
7,3,4-TRIHYDROXY-3,8-DIMETHOXYFLAVONE	Plant		--	--		*
7,8,14'-TRIHYDROXYFLAVONOL	Plant		--	--		*
7,8,3',4-TETRAHYDROXY-3-METHOXYFLAVONE	Plant		--	--		*
7,8,4-TRIHYDROXY-3-METHOXYFLAVONE	Plant		--	--		*
8-METHOXYFISETIN	Plant		--	--		*
8-METHOXYFLAVONE-3,4-DIONES	Plant		--	--		*
ACACATECHIN	Plant		--	--		*
ACETALDEHYDE	Plant		--	--		*

Activities (6)

Addictive 8 ug/kg	Science News, 145: 294.
Fungicide	
Perfumery FEMA 4-25	Aloe Research Council - Duke writeup of non-peer reviewed book by Coats and draft by Henry
Pesticide	
Respirapalytic	
Tyrosinase-Inhibitor ID50=43 ug/ml	

ALDOBIURONIC-ACID	Plant		--	--		*
ALPHA-AMINO-BETA-OXALYLAMINO-PROPIONIC-ACID	Plant		--	--		*
ALPHA-CATECHIN	Plant		--	--		*
ASH	Leaf		--	98000.0	-0.37	*
BETA-CATECHIN	Plant		--	--		*
BORON	Plant		--	--		*

Activities (4)

Androgenic 3 mg/man/day	
Antiosteoarthritis	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antiosteoporotic 3 mg/man/day	
Estrogenic 3 mg/man/day	

CALCIUM	Leaf	--	27400.0	0.61	*
Activities (28)					
AntiPMS 1 g/day					
Antiallergic 500 mg/day					
Antianxiety	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.				
Antiarrhythmic 500-1,500 mg					
Antiarthritic 1,000 mg/day					
Antiatherosclerotic 500 mg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.				
Anticlimacteric 1,000-1,500 mg/day					
Antidepressant	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.				
Antidote (Aluminum)	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.				
Antidote (Lead)	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.				
Antihyperkinetic	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.				
Antihypertensive					
Antiinsomniac	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.				
Antimenopausal 1,000-1,500 mg/day					
Antiobesity					
Antiosteoporotic 500-2,000 mg/day					
Antiperiodontitic 750 mg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.				
Antirheumatic 1,000 mg/day					
Antistress 500-1,500 mg/day					
Antitic	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.				
Anxiolytic 500-1,500 mg/day					
Calcium-Channel-Blocker					
Diuretic					
Hypocholesterolemic 500 mg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.				
Hypotensive 1 g/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.				
Laxative 1,000-1,200 mg					
Tranquilizer 500-1,500 mg/day					
Vasodilator					
CARBOHYDRATES	Leaf	--	726000.0	0.91	*
CATECHINS	Exocarp	25000.0	330000.0		*
Activities (1)					
Tyrosine-Kinase-Inhibitor					
CATECHUIC-ACID	Plant	--	--		*
CATECHUTANNIC-ACID	Gum	--	--		*
COBALT	Plant	--	--		*
Activities (2)					
Cardiomyopathogenic	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.				
Erythrocytogenic	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.				
D-ARABINOSE	Plant	--	--		*
D-GALACTOSE	Plant	--	--		*
D-GLUCURONIC-ACID	Plant	--	--		*
D-XYLOSE	Plant	--	--		*
DIAMINO-ACID	Plant	--	--		*
DIHYDROKAEMPFEROL	Plant	--	--		*
DL-CATECHOL	Plant	--	--		*
DL-EPICATECHIN	Plant	--	--		*
EPICATECHOL	Plant	--	--		*
FAT	Leaf	--	46000.0	-0.21	*
FIBER	Leaf	--	226000.0	0.8	*

Activities (15)

Angiotensin-Receptor-Blocker	
Antidiabetic	
Antihypertensive	
Antiobesity	
Antitumor	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Antiulcer	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Beta-Blocker	
Cancer-Preventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.
Cardioprotective	
Diuretic	
Hypocholesterolemic	
Hypotensive 10 g/man/day/orl	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Hypouricemic	
Laxative	
Vasodilator	

FISETIN

Plant

--

--

*

Activities (15)

5-Lipoxygenase-Inhibitor IC50 (uM)=11	
ACE-Inhibitor IC50=150 uM/	
Allergenic	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Antihistaminic	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Antimutagenic ID50=10-40 nM	Phenolic Compounds in Food and Their Effects on Health. Antioxidants & Cancer Prevention. Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. ACS Symposium Series 507. ACS, Washington 402 pp.
Antioxidant	Jim Duke's personal files.
Antiviral	Economic & Medicinal Plant Research, 5: 197.
Cyclooxygenase-Inhibitor IC50 (uM) =80	
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 IC50 (uM)=11	
Lipoxygenase-Inhibitor	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Oxidase-Inhibitor	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Pesticide	
Topoisomerase-I-Inhibitor IC50=20.6 ug/ml	
Topoisomerase-II-Inhibitor IC50=8.2 ug/ml	Constantinou, A., Mehta, R., Runyan, C., Rao, K., Vaughan, A., Moon, R. 1995. Flavonoids as DNA Topoisomerase Antagonists and Poisons: Structure-Activity Relationships. J Natural Products, 58: 217-225.

FLAVOTANNIN

Plant

--

--

*

FORMALDEHYDE

Plant

--

--

*

Activities (12)

Allergenic	
Anesthetic	Martindale's 29th
Anticystitic	Martindale's 29th
Antiplantar	Martindale's 29th
Antiseptic	Martindale's 29th
Antiviral	Martindale's 29th
Fungicide	Martindale's 29th
Irritant	Martindale's 29th
Mutagenic	Martindale's 29th
Neoplastic	Martindale's 29th
Pesticide	
Scolicide	Martindale's 29th

GALLIC-ACID

Plant

--

--

*

Activities (62)

ACE-Inhibitor IC50=7.7 mM/l	
Analgesic	
AntiHIV	

AntiMRSA	
Antiadenovirus	Economic & Medicinal Plant Research, 5: 194.
Antiallergenic	Dorsch, W., Wagner, H. New Antiasthmatic Drugs from Traditional Medicine? Int Arch Allergy Appl Immunol 94: 262-265, 1991.
Antianaphylactic	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Antiangiogenic	
Antiasthmatic	Watt, J.M., and Breyer-Brandwijk, M.G. The Medicinal and Poisonous Plants of Southern and Eastern Africa. 1962.
Antibacterial MIC=1,000 ug/ml	
Antibronchitic	Dorsch, W., Wagner, H. New Antiasthmatic Drugs from Traditional Medicine? Int Arch Allergy Appl Immunol 94: 262-265, 1991.
Anticancer	
Anticarcinomic ED50=3	
Antiescherichic	
Antifibrinolytic	Economic & Medicinal Plant Research, 1: 53.
Antiflu	Economic & Medicinal Plant Research, 5: 194.
Antihepatotoxic	Okuda, T., Yoshida, T., and Hatano, T. Antioxidant Effects of Tannins and Related Polyphenols. Phenolic Compounds in Food and Their Effects on Health, Ch.7 p.93.
Antiherpetic EC50=>10 ug/ml	
Antiinflammatory	Kroes, B.H., et al. 1991. Anti-Inflammatory Activity of Gallic Acid. Planta Medica, 58(6): 499.
Antileishmanic EC50=4.4 ug/ml	
Antimutagenic	Economic & Medicinal Plant Research, 6: 235.
Antinitrosaminic	
Antioxidant IC44=33 ppm	
Antioxidant 7 x quercetin	
Antioxidant 2/3 BHA	
Antiperiodontitic 10 ug/ml	
Antiperoxidant IC50=69 uM	
Antipolio	Economic & Medicinal Plant Research, 5: 194.
Antiproteolytic 10 ug/ml	
Antiradicular 7 x quercetin	
Antiradicular IC50=4.9 uM	
Antiseptic	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.
Antistaphylococcic MIC=1,000 ug/ml	
Antitumor	
Antitumor-Promoter	
Antiviral	
Apoptotic	
Astringent	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.
Bacteristat	Lamikanra, A., Ogundaini, A.O., and Ogungbamila*, F.O. Antibacterial Constituents of Alchornea cordifolia Leaves. Phytotherapy Research 4(5): 198.
Bronchodilator	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Cancer-Preventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.
Candidicide	
Carcinogenic	
Choleretic	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Cyclooxygenase- Inhibitor	
Cytotoxic 500 uM	
Floral-Inhibitor	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Gram(+)icide MIC=1,000 ug/ml	
Gram(-)icide MIC=1,000 ug/ml	
Hemostat	
Hepatoprotective	Newwinger, H. D. 1996. African Ethnobotany - Poisons and Drugs. Chapman & Hall, New York. 941 pp.
Immunomodulator	
Immunostimulant	McKenna, D. J., Hughes, K., and Jones, K. 2000. Green Tea Monograph. Alternative Therapies, 6(3): 61-82.
Immunosuppressant	
Insulin-Sparing	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Myorelaxant	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.

NO-Inhibitor IC-26=250 uM				
Nephrotoxic	Martindale's 29th			
Pesticide				
Styptic				
Topoisomerase-I-Inhibitor	Hamada, S. I., Kataoka, T., Woo, J. T., Yamada, A., Yoshida, T., Nishimura, T., Otake, N., Nagai, K. 1997. Immunosuppressive Effects by Gallic Acid and Chebulagic Acid on CTL-Mediated Cytotoxicity. Biol Pharm Bull, 20: 1017-1019.			
Xanthine-Oxidase-Inhibitor IC50=24 uM	Hatano, T., Yasuhara, T., Yoshihara, R., Agata, I., Noro, T., and Okuda, T. 1989. Effects of Interaction of Tannins with Co-existing Substances.VII. Inhibitory Effects of Tannins Related Polyphenols on Xanthine Oxidase. Chem. Pharm. Bull. 38(5): 1224-1229			

GALLO-TANNIN Plant -- -- *

Activities (2)

Cardiotoxic
Reverse-Transcriptase-Inhibitor

GAMMA-CATECHIN Plant -- -- *

GLUCOSE Plant -- -- *

Activities (7)

Acetylcholinergic
Antiedemic Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Antihepatotoxic Merck 11th Edition
Antiketotic Merck 11th Edition
Antivaricose Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Hyperglycemic Merck 11th Edition
Memory-Enhancer Science News, 138: 189, 1990.

GLUCOSYLURONIC-ACID Plant -- -- *

GUM Plant -- -- *

ISOACACATECHIN Plant -- -- *

ISORHAMNETIN Plant -- -- *

Activities (11)

Antibacterial
Antihistaminic 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.
Antiinflammatory 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.
Antioxidant 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.
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.
Cancer-Preventive Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.
Hepatoprotective 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 210.
MAO-Inhibitor
Pesticide
Quinone-Reductase-Inducer Yannai, S., Day, A. J., Williamson, G., Rhodes, M. J. C. 1998. Characterization of Flavonoids as Monofunctional or Bifunctional Inducers of Quinone Reductase in Murine Hepatoma Cell Lines. Food Chem Toxicol, 36(8): 623-630.
Vasodilator

ISOVALERALDEHYDE Plant -- -- *

Activities (1)

FLavor FEMA 0.5-5 Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry

KAEMPFEROL Plant -- -- *

Activities (75)

11B-HSD-Inhibitor
5-Lipoxygenase-Inhibitor IC50 (uM)=20
Aldose-Reductase-Inhibitor 100 uM Oliveira, T. T., Nagem, T. J., Miranda, L. C. G., Paula, V. F., Teixeira, M. A. 1997. Inhibitory Action on Aldose Reductase by Soybean Flavonoids. J Braz Chem Soc, 8(3): 211-213.
Antiaflatoxin IC50=8.73 uM
Antiaflatoxin IC50=3.28 ppm

Antiaggregant 30 uM	
Antiallergic	
Antibacterial 20 ug/ml	
Anticancer	
Antifertility 250 mg/kg/day/60 days/orl rat	Kumar, P., Dixit*, V.P., and Khanna, P. Antifertility Studies of Kaempferol: Isolation and Identification from Tissue Culture of some Medicinally Important Plant Species. <i>Plantes medicinales et phytotherapie</i> , 23: 193-201, 1989.
Antingivitic 20 ug/ml	
Antiherpetic 23-92 ug/ml	Amoros, M., Simoes, C.M.O., Girre, L., et al. Synergistic Effect Of Flavones And Flavonols Against Herpes Simplex Virus Type 1 In Cell Culture. Comparison With The Antiviral Activity Of Propolis. <i>J. of Natural Products</i> 55(12):1732-1740, 1992.
Antihistaminic	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.
Antiimplantation	
Antiinflammatory 20 mg/kg	
Antiinflammatory 200 mg/kg ipr rat	
Antileukemic IC50=3.1 ug/ml	<i>Life Sciences</i> 55: 1061.
Antilymphocytic	Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp.
Antimutagenic ID50=10-40 nM	Phenolic Compounds in Food and Their Effects on Health. <i>Antioxidants & Cancer Prevention</i> . Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. ACS Symposium Series 507.ACS, Washington 402 pp.
Antioxidant IC50=40 uM	
Antioxidant 3/4 quercetin	
Antioxidant IC50=1.2 ug/ml	
Antiperiodontic 20 ug/ml	
Anti plaque 20 ug/ml	
Antiradicular 7 x quercetin	
Antiseptic 20 ug/ml	
Antiserotonin 200 mg/kg ipr rat	
Antispasmodic	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.
Antistaphylococcic	
Antitumor	
Antitumor-Promoter	Yasukawa, K., Takido, M., Takeuchi, M., Sato, Y., Nitta, K., and Nakagawa, S. 1989. Inhibitory Effects of Flavonol Glycosides on 12-O-Tetradecanoylphorbol-13-acetate-Induced Tumor Promotion. <i>Chem. Pharm. Bull.</i> 38(3): 774-776, 1990.
Antiulcer 50-200 mg/kg ipr rat	
Antiviral 23-92 ug/ml	
Apoptotic 60 uM	
Aromatase-Inhibitor IC12=1 uM/l	<i>Journal of Medicinal Food</i> 2: 235.1999.
COX-2-Inhibitor	
Cancer-Preventive	Stitt, P. A. <i>Why George Should Eat Broccoli</i> . Dougherty Co, Milwaukee, WI, 1990, 399 pp.
Carcinogenic	Hutchings, A, Scott, AH, Lewis, G, and Cunningham, A. 1996. <i>Zulu Medicinal Plants. An inventory</i> . University of Natal Press, Pietermaritzburg. 450 pp.
Choleretic	Leung, A. Y. and Foster, S. 1995. <i>Encyclopedia of Common Natural Ingredients</i> 2nd Ed. John Wiley & Sons, New York. 649 pp.
Copper-Chelator	
Cyclooxygenase-Inhibitor IC50 (uM) =20	
Cytotoxic	
Diaphoretic?	<i>Lawrence Review of Natural Products</i> , Dec-90.
Diuretic	
Estrogenic EC50=0.1-25 uM/l	<i>Journal of Medicinal Food</i> 2: 227.1999.
Estrogenic EC50=0.56 uM	
Fungicide 20 ug/ml	Father Nature's Farmacy: The aggregate of all these three-letter citations.
HIV-RT-Inhibitor IC50=50-150 ug/ml	Garcia, J., Morin,* C., Nyasse, B., Sondengam, B-L., Tchouankeu, J-C., and Tsamo, E. Complete Structural Assignments Of An Ergosterol Derivative From <i>Entandrophragma utile</i> . <i>Journal of Natural Products</i> , 54(1): 136-142, 1991.
Hepatoprotective IC50=5.46 uM	
Hepatoprotective IC50=1.30 ppm	
Hypotensive	
ICAM-1-Inhibitor	
Inotropic	
Iodothyronine-Deiodinase-Inhibitor	Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp.
JNK-Inhibitor	
Lipoxygenase-Inhibitor IC50=50-150 ug/ml	Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp.
MAO-Inhibitor	
Mutagenic	

NO-Inhibitor IC50=13.9
uM

Natriuretic

Neuroprotective

PAF-Inhibitor

Pesticide

Protisticide Meckes, M., Calzada, F., Tapia-Contreras, A., Cedillo-Rivera, R. 1999. Antiprotozoal Properties of Helianthemum glomeratum. *Phytotherapy Research*, 13(2): 102-105.

Quinone-Reductase-
Inducer 3 uM

TNF-alpha-Inhibitor
IC50=3.99 uM

Teratologic

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.

Topoisomerase-II-
Inhibitor IC50=8.1 ug/ml Constantinou, A., Mehta, R., Runyan, C., Rao, K., Vaughan, A., Moon, R. 1995. Flavonoids as DNA Topoisomerase Antagonists and Poisons: Structure-Activity Relationships. *J Natural Products*, 58: 217-225.

Tyrosinase-Inhibitor
ID50=230 uM

Uterotrophic EC50=0.1-
25 uM/l Journal of Medicinal Food 2: 227.1999.

Vasodilator

cAMP-
Phosphodiesterase-
Inhibitor

iNOS-Inhibitor IC50=
<15 uM

iNOS-Inhibitor
IC50=13.9 uM

L-EPICATECHIN	Plant	--	--	*
L-LEUCOMACLURIC-GLYCOL-ETHER	Plant	--	--	*
L-RHAMNOSE	Plant	--	--	*
MAGNESIUM	Plant	--	--	*

Activities (65)

AntiCFS

AntiLyme 400-1,000 mg

AntiMS

AntiPMS 400-800
mg/day/wmn/orl

AntiPMS 400-800
mg/day/wmn orl

AntiRaynaud's 280-350
mg/day

Antiaggregant 400 mg/day

Antialcoholic

Antianginal 400 mg/day Werbach, M. 1993. *Healing with Food*. Harper Collins, New York, 443 pp.

Antianorectic Davies, S., and Stewart, A. 1990. *Nutritional Medicine*. Avon Books, New York. 509pp.

Antianxiety 400 mg/day Werbach, M. 1993. *Healing with Food*. Harper Collins, New York, 443 pp.

Antiarrhythmic 400 mg/day

Antiarthritic Davies, S., and Stewart, A. 1990. *Nutritional Medicine*. Avon Books, New York. 509pp.

Antiasthmatic Pizzorno, J.E. and Murray, M.T. 1985. *A Textbook of Natural Medicine*. John Bastyr College Publications, Seattle, Washington (Looseleaf).

Antiatherosclerotic 400
mg/day

Anticephalagic

Anticlimacteric 500-750
mg/day

Anticonvulsant Facciola, S. 1998. *Cornucopia - A Source Book of Edible Plants*. Kampong Publications, Vista CA. 713 pp.

Anticoronary 400 mg/day Chalem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. *Syndrome X - The complete nutritional program to prevent and reverse insulin resistance*. John Wiley & Sons, New York. 272 pp. \$24.95

Antidepressant Davies, S., and Stewart, A. 1990. *Nutritional Medicine*. Avon Books, New York. 509pp.

Antidiabetic 400-800
mg/man/day

Antidysmenorrheic 100 mg 4
x/day Werbach, M. 1993. *Healing with Food*. Harper Collins, New York, 443 pp.

Antiendometriotic 500
mg/day

Antienterotic

Antiepileptic 450 mg/day

Antifatigue

Antifibromyalgic 200-300 mg
3x/day

Antigastrotic

Antiglaucomic

Antihyperkinetic Davies, S., and Stewart, A. 1990. *Nutritional Medicine*. Avon Books, New York. 509pp.

Antihypertensive	
Antihypoglycemic	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Antiinflammatory 100 mg 4 x/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antiinsomniac	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Antilithic	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Antimastalgic	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Antimenopausal 500-750 mg/day	
Antimigraine 200 mg/day/man	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antimitral-valve-prolapse	
Antinephrolytic	
Antineurotic	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Antiosteoporotic 500-1,000 mg/day/wmn/orl	
Antiplateau 500-1,000 mg/day	
Antiretinopathic 400 mg/day	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reserve insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95
Antispasmodic	
Antispasmophilic 500 mg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antistress 500-750 mg/day	
Antistroke 400 mg/day	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reserve insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95
Antisyndrome-X 400 mg/man/day	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reserve insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95
Anxiolytic 500-750 mg/day	
CNS-Depressant	Facciola, S. 1998. Cornucopia - A Source Book of Edible Plants. Kampong Publications, Vista CA. 713 pp.
Calcium-Antagonist	
Cardioprotective	
Diuretic	
Hypocholesterolemic 400 mg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Hypotensive 260-500 mg/day	
Immunomodulator	
Insulinogenic 400 mg/day	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reserve insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95
Laxative 300-500 mg/day	
Litholytic	
Myorelaxant 100 mg 4 x/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Neurotransmitter	
Tranquilizer 500-750 mg/day	
Uterorelaxant 100 mg 4 x/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Vasodilator	

MALATE-DEHYDROGENASE Plant -- -- *

MANGANESE Plant -- -- *

Activities (14)

AntiPMS	
Antialcoholic	Forest H. Nielsen, USDA, Grand Forks, various publications.
Antianemic	Martindale's 28th
Antiarthritic	
Antidiabetic 3-5 mg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antidiabetic 10-30 mg/man/day	
Antidiscotic	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Antidyskinetic	Martindale's 28th
Antiepileptic 450 mg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antiosteoporotic	
Antiototic	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Antioxidant	
Antisyndrome-X 10-30 mg/man/day	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reserve insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95
Hypoglycemic 10-30 mg/man/day	

PEROXIDASE Plant -- -- *

PHLOBATANNIN Plant -- -- *

PHOSPHATASE Plant -- -- *

PHOSPHORUS Leaf -- 1700.0 -0.6 *

Activities (4)

Antiosteoporotic Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
 Anxiolytic
 Immunostimulant Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
 Osteogenic Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.

PROCYANIDIN Plant -- -- *

Activities (11)

AntiHIV
 Antiallergic
 Antibacterial
 Antibiotic
 Antiedemic
 Antiexudative
 Antiviral
 Capillariprotective
 Hyaluronidase-Inhibitor
 Pesticide
 Xanthine-Oxidase-Inhibitor IC50=>40 Hatano, T., Yasuhara, T., Yoshihara, R., Agata, I., Noro, T., and Okuda, T. 1989. Effects of Interaction of Tannins with Co-existing Substances.VII. Inhibitory Effects of Tannins Related Polyphenols on Xanthine Oxidase. Chem. Pharm. Bull. 38(5): 1224-1229

PROTEIN Leaf -- 130000.0 -0.82 *

QUERCETAGETIN Plant -- -- *

Activities (8)

Aldose-Reductase-Inhibitor IC71=10 uM Shimizu, M., Ito, T., Terashima, S., Hayashi, T., Arisawa, M., Morita, N., Kurokawa, S., Ito, K., and Hashimoto, Y. 1984. Inhibition of Lens Aldose Reductase by Flavonoids. Phytochemistry, 23: 1885-1888.
 Aldose-Reductase-Inhibitor IC29=1 uM
 AntiHIV
 Antibacterial Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
 Antioxidant Nigg, H.N. and Seigler, D.S., eds. 1992. Phytochemical Resources for Medicine and Agriculture. Plenum Press, New York. 445 pp.
 Dye Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
 HIV-RT-Inhibitor IC50=<1 ug/ml Nakane, H., Fukushima, M., and Ono*, K. Differential Inhibition Of Reverse Transcriptase And Various DNA Polymerases By Digallic Acid And Its Derivatives. Journal of Natural Products, 53(5): 1234-1240, 1990.
 Pesticide

QUERCETIN Plant -- -- *

Activities (176)

11B-HSD-Inhibitor
 5-Lipoxygenase-Inhibitor IC50 (uM)=4
 ATPase-Inhibitor Nigg, H.N. and Seigler, D.S., eds. 1992. Phytochemical Resources for Medicine and Agriculture. Plenum Press, New York. 445 pp.
 Aldehyde-Oxidase-Inhibitor IC70-96=10 uM
 Aldose-Reductase-Inhibitor 100 uM
 Aldose-Reductase-Inhibitor 4 ug/ml Ichikawa, K., et al. 1991. Isolation and Structure Determination of Aldose Reductase Inhibitors from Traditional Thai Medicine, and Syntheses of Their Derivatives. Sankyo Kenkyusho Nempo, 43: 99-110.
 Aldose-Reductase-Inhibitor IC50=0.84 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.Chem Pharm Bull43(8):1385-1387
 Aldose-Reductase-Inhibitor IC50=0.344 uM Mao, X. M., Zhang, J. Q. 1993. Inhibition of Aldose Reductase by Extracts of Chinese Herbal Medicine. Zhongguo Zhongyao Zazhi , 18(10): 623-624.
 Allelochemic IC82=1 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.
 Allergenic Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
 Analgesic
 AntiCrohn's 400 mg/man/3x/day Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
 AntiGTF ID50=120 ug/ml
 AntiHIV
 AntiPMS 500 mg/2x/day/wmn Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
 Antiaflatoxin IC50=25 uM
 Antiaflatoxin IC50=7.5 ppm

Antianggregant IC50=55 uM	Economic & Medicinal Plant Research, 5: 333.
Antianggregant 30 uM	
Antiaging	
Antiallergic IC50=14 uM	Jim Duke's personal files.
Antialzheimeran	
Antianaphylactic	Meli, R., Autore, G., Di Carlo, G., Capasso, F. Inhibitory Action of Quercetin on Intestinal Transit in Mice. <i>Phytotherapy Research</i> 4(5): 201, 1990.
Antiangiogenic	
Antiarthritic	
Antiasthmatic IC50=14 uM	
Antiatherosclerotic	
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.
Anticarcinomic (Breast) IC50=1.5 uM	Medline (post 1990 searches filed in my computer)
Anticariogenic ID50=120 ug/ml	
Anticataract	
Anticolitic 400 mg/man/3x/day	Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine.</i> John Bastyr College Publications, Seattle, Washington (Looseleaf).
Anticomplementary	
Anticystitic 1,000 mg/day/4 weeks	
Antidepressant	
Antidermatitic	Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine.</i> John Bastyr College Publications, Seattle, Washington (Looseleaf).
Antidiabetic	
Antielastase IC50=0.8 ug/ml	
Antiencephalitic	Economic & Medicinal Plant Research, 5: 199.
Antiescherichic	
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, <i>Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology</i> , v. 4, Oryx Press, Phoenix, 1989, 267pp.
Antifibrosarcomic	
Antiflu	Vlietinck, A.J. and Dommissie, R.A. eds. 1985. <i>Advances in Medicinal Plant Research.</i> Wiss. Verlag. Stuttgart.
Antigastric	Rastitel'nye Resursy, 21: 85.
Antigonadotropic	Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants.</i> Taylor & Frost, London. 791 pp.
Antihepatotoxic	Joyeux, M., Rolland, A., Fleurentin, J., Mortier, F., and Dorfman, P. 1989. Tert-Butyl Hydroperoxide-Induced Injury in Isolated Rat Hepatocytes: A Model for Studying Anti-Hepatotoxic Crude Drugs. <i>Planta Medica</i> 56(2): 171-173, 1990.
Antiherpetic 48-150 ug/ml	
Antihistaminic IC50=<10 uM	
Antihydrophobic	Vlietinck, A.J. and Dommissie, R.A. eds. 1985. <i>Advances in Medicinal Plant Research.</i> Wiss. Verlag. Stuttgart.
Antihypertensive	Huang, K. C. 1993. <i>The Pharmacology of Chinese Herbs.</i> CRC Press, Boca Raton, FL 388 pp.
Antiinflammatory 20-150 mg/kg	Fitoterapia No.5-1990.
Antileishmanic IC50=64	
Antileukemic IC50=10 uM	Economic & Medicinal Plant Research, 5: 225.
Antileukemic IC50=>10 ug/ml	Life Sciences 55: 1061.
Antileukemic 5.5-60 uM	
Antileukotriene	Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine.</i> John Bastyr College Publications, Seattle, Washington (Looseleaf).
Antilipoperoxidant IC67=50	
Antimalarial IC50=1-6.4 ug/ml	Medicinal and Poisonous Plants of the Tropics. Leeuwenberg, A.J.M., ed. Pudoc, Wageningen. 1987.
Antimelanomic	
Antimetastatic	
Antimutagenic ID50=2-5 nM	Phenolic Compounds in Food and Their Effects on Health. Antioxidants & Cancer Prevention. Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. ACS Symposium Series 507.ACS, Washington 402 pp.
Antimutagenic ID50=0.62 ug/ml	
Antimyocarditic	Economic & Medicinal Plant Research, 5: 199.
Antinitrosaminic	
Antinociceptive	
Antioxidant IC96=300 ppm	Phenolic Compounds in Food and Their Effects on Health. Antioxidants & Cancer Prevention. Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. ACS Symposium Series 507.ACS, Washington 402 pp.
Antioxidant ED50=2.3 uM	Seidel, V., Verholle, M., Malard, Y., Tilleguin, F., Fruchart, J-C., Duriez, P., Bailleul, F., Teissier, E. 2000. Phenylpropanoids from <i>Ballota nigra</i> L. Inhibit in vitro LDL Peroxidation. <i>Phytotherapy Research</i> , 14(2): 93-98.
Antioxidant 4.7 x Vit. E	
Antioxidant IC47=10 uM	
Antipancreatic	Joseph, J., Nadeau, D. and Underwood, A. 2001. <i>The Color Code.</i> Hyperion, NY.
Antiperiodontal	Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine.</i> John Bastyr College Publications, Seattle, Washington (Looseleaf).

Antiperistaltic	
Antipermeability	
Antiperoxidant	Planta Medica, 57: A110, 1991.
Antipharyngitic	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Antiplaque	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Antiplasmodial IC50=13-64	
Antipodriac	
Antipolio	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Antiproliferant 10 nM	
Antiprostanoïd	
Antiprostatiic	Joseph, J., Nadeau, D. and Underwood, A. 2001. The Color Code. Hyperion, NY.
Antipsoriac	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Antiradicular IC50=4.6 uM	Planta Medica, 56(6): 695, 1990.
Antispasmodic	
Antistreptococcic ID50=120 ug/ml	
Antithiamin	Phenolic Compounds in Food and Their Effects on Health, 69.
Antithrombic	
Antitrypanosomic IC50=13	
Antitumor 10 uM	
Antitumor (Bladder)	
Antitumor (Breast)	
Antitumor (Colon)	
Antitumor (Lung)	
Antitumor (Ovary)	
Antitumor (Skin) 20 uM	
Antitumor-Promoter	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Antiulcer	
Antiviral IC50=10 uM	Economic & Medicinal Plant Research, 5: 225.
Antiviral 48-150 ug/ml	Amoros, M., Simoes, C.M.O., Girre, L., et al. Synergistic Effect Of Flavones And Flavonols Against Herpes Simplex Virus Type 1 In Cell Culture. Comparison With The Antiviral Activity Of Propolis. J. of Natural Products 55(12):1732-1740, 1992.
Apoptotic 20-60 uM	
Bacteristat 10 mg/ml	
Bradycardiac	Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp.
COMT-Inhibitor	
COX-2-Inhibitor <40 uM	
Calmodulin-Antagonist	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Cancer-Preventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.
Candidicide	
Capillariprotective	Merck 11th Edition
Carcinogenic 40,000 ppm (diet) mus	Nigg, H.N. and Seigler, D.S., eds. 1992. Phytochemical Resources for Medicine and Agriculture. Plenum Press, New York. 445 pp.
Catabolic	
Copper-Chelator	
Cyclooxygenase-Inhibitor	
Cytochrome-P450-1A2-Inhibitor	
Cytotoxic ED50=70 ug/ml	Matsukawa, Y., et al. The Effect of Quercetin and Other Flavonoids on Cell Cycle Progresssion and Growth of Human Gastric Cancer Cells. Planta Medica, 56(6): 677, 1990.
Cytotoxic IC82=100 ug/ml	Planta Medica, 57: A113, 1991.
Deiodinase-Inhibitor	Jim Duke's personal files.
Diaphoretic?	Lawrence Review of Natural Products, Dec-90.
Differentiator 5.5 uM	
Estrogenic 10% genistein	
Fungicide	
Glucosyl-Transferase-Inhibitor ID50=120 ug/ml	
HIV-RT-Inhibitor IC50=<1 ug/ml	Nakane, H., Fukushima, M., and Ono*, K. Differential Inhibition Of Reverse Transcriptase And Various DNA Polymerases By Digallic Acid And Its Derivatives. Journal of Natural Products, 53(5): 1234-1240, 1990.
Hemostat	Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp.
Hepatomagenic 5,000 ppm (diet) rat	Phenolic Compounds in Food and Their Effects on Health. Antioxidants & Cancer Prevention. Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. ACS Symposium Series 507.ACS, Washington 402 pp.
Hepatoprotective	
Hypoglycemic 100 mg/kg orl rat	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.
Inotropic	
Insulinogenic	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Juvabional	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.

Larvostat 8,000 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.
Lipoxygenase-Inhibitor IC11=1.25 mM	Oszmianski, J. and Lee, C.Y. 1990. Inhibitory Effect of Phenolics on Carotene Bleaching in Vegetables. J. Agric. Food Chem. 38: 688-690.
Lipoxygenase-Inhibitor IC50=0.1-5 uM	
MAO-A-Inhibitor	
MMP-9-Inhibitor 20 uM	
Mast-Cell-Stabilizer	
Metal-Chelator (Copper)	Seidel, V., Verholle, M., Malard, Y., Tilleguin, F., Fruchart, J-C., Duriez, P., Bailleul, F., Teissier, E. 2000. Phenylpropanoids from <i>Ballota nigra</i> L. Inhibit in vitro LDL Peroxidation. <i>Phytotherapy Research</i> , 14(2): 93-98.
Metalloproteinase-Inhibitor IC50=>42 uM	
Mutagenic	
NADH-Oxidase-Inhibitor	
NEP-Inhibitor IC50=>42 uM	
NF-kB-Inhibitor	
NO-Inhibitor IC>50=125 uM	
NO-Inhibitor IC50=20 uM	
NO-Synthase-Inhibitor 5-50 uM	
Neuroprotective 5-25 uM	
Ornithine-Decarboxylase-Inhibitor <10 uM	
P450-Inducer 5 uM	Father Nature's Farmacy: The aggregate of all these three-letter citations.
P450-Inhibitor 50-100 uM	Father Nature's Farmacy: The aggregate of all these three-letter citations.
PGE2-Inhibitor	
PTK-Inhibitor 0.4-24 uM	
Pesticide	
Phospholipase-Inhibitor	
Plasmodicide	Neuwinger, H. D. 1996. <i>African Ethnobotany - Poisons and Drugs</i> . Chapman & Hall, New York. 941 pp.
Proliferant	
Prostaglandin-Synthesis-Inhibitor 40 ug/ml	Ibewuike, J. C., Ogunbamila, F. O., Ogundaini, A. O., Okeke, I. N., Bohlin, L. 1997. Antiinflammatory and Antibacterial Activities of C-methylflavonol from <i>Piliostigma thonningii</i> . <i>Phytotherapy Research</i> , 11(4): 281-284.
Protein-Kinase-C-Inhibitor	Naim, M., Zehavi, U., Nagy, S., and Rouseff, R.L. Hydroxycinnamic Acids as Off-Flavor Precursors in Citrus Fruits and Their Products. <i>Phenolic Compounds in Food and Their Effects on Health</i> , Ch.14.
Quinone-Reductase-Inducer 6 uM	Uda, Y., Price, K. R., Williamson, G., Rhodes, M. J. C. 1997. Induction of the Anticarcinogenic Marker Enzyme, Quinone Reductase, in Murine Hepatoma Cells In Vitro by Flavonoids. <i>Cancer Lett.</i> , 120 (2): 213-216.
Quinone-Reductase-Inducer 13 uM	
TNF-alpha-Inhibitor IC50=3.11 uM	
Teratologic	
Topoisomerase-I-Inhibitor IC50=12.8 ug/ml	
Topoisomerase-I-Inhibitor IC50=42 uM	
Topoisomerase-II-Inhibitor IC50=1-6.9 ug/ml	
Topoisomerase-II-Inhibitor IC50=23-40 uM	
Tumorigenic 0.1% diet orl rat/yr	Jim Duke's personal files.
Tyrosinase-Inhibitor ID50=70 uM	
Tyrosine-Kinase-Inhibitor	<i>Economic & Medicinal Plant Research</i> , 6: 170.
VEGF-Inhibitor	
Vasodilator	
Xanthine-Oxidase-Inhibitor IC50=>0.4 ug/ml	<i>Chem. & Pharm. Bull.</i> 38: 1772.
Xanthine-Oxidase-Inhibitor IC50=10.6 ug/ml	
Xanthine-Oxidase-Inhibitor 3.1 uM	
cAMP-Phosphodiesterase-Inhibitor	Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf).
iNOS-Inhibitor IC50=20 uM	

QUERCITRIN Plant -- -- *

Activities (44)

ACE-Inhibitor
IC50=0.67 mM/

Aldose-Reductase-Inhibitor IC50=2 uM Terashima, S., Shimizu, M., Nakayama, H., Ishikura, M., et al. 1990. Studies on Aldose Reductase Inhibitors from Medicinal Plant of 'Sinfito,' *Potentilla candicans*, and Further Synthesis of Their Related Compounds. *Chem. Pharm. Bull* 38(10):2733-2736, 1990

Aldose-Reductase-Inhibitor IC55=0.15 uM

Aldose-Reductase-Inhibitor 0.1-100 uM

Aldose-Reductase-Inhibitor 0.5-4 ug/ml

Aldose-Reductase-Inhibitor IC50=64 uM rat Al-Khalil, S. 1996. Inhibition of Lens Alkaloids Reductase by Protopine Alkaloids. *Saudi Pharm J*, 4(1): 45-47.

Aldose-Reductase-Inhibitor IC55=0.1 uM

Antiarrhythmic

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

Anticataract

Antiedemic Huang, K. C. 1993. *The Pharmacology of Chinese Herbs.* CRC Press, Boca Raton, FL 388 pp.

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.

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

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

Antihepatotoxic

Antiherpetic Economic & Medicinal Plant Research, 5: 198.

Antiinflammatory Huang, K. C. 1993. *The Pharmacology of Chinese Herbs.* CRC Press, Boca Raton, FL 388 pp.

Antimutagenic ID50=2-5 nM Phenolic Compounds in Food and Their Effects on Health. Antioxidants & Cancer Prevention. Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. *ACS Symposium Series 507.ACS*, Washington 402 pp.

Antioxidant IC50=120 uM

Antipurpuric

Antispasmodic

Antistaphylococcic 0.41%

Antithrombogenic

Antitumor

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

Antiviral

CNS-Depressant

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

Cardiotonic

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

Cyclooxygenase-Activator 200 uM 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.

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

Diuretic Huang, K. C. 1993. *The Pharmacology of Chinese Herbs.* CRC Press, Boca Raton, FL 388 pp.

Dye Merck 11th Edition

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

Hepatotonic

Hypoglycemic Economic & Medicinal Plant Research, 6: 189.

Hypotensive

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

MAO-A-Inhibitor

MAO-Inhibitor

Paralytic

Pesticide

Vasopressor

RUTIN

Plant

--

--

*

Activities (87)

5-HT-Inhibitor

Aldehyde-Oxidase-Inhibitor IC27-52=10 uM

Aldose-Reductase-Inhibitor 100 uM

Aldose-Reductase-Inhibitor 4 ug/ml Ichikawa, K., et al. 1991. Isolation and Structure Determination of Aldose Reductase Inhibitors from Traditional Thai Medicine, and Syntheses of Their Derivatives. *Sankyo Kenkyusho Nempo*, 43: 99-110.

Allelochemic

AntiCVI 270 mg/man/day

Antiaggregant ED50=33 nmol/kg iv	
Antiallergic	
Antiapoplectic	
Antiatherogenic	
Antiatherosclerotic	
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.
Anticancer	
Anticapillary-Fragility 20-100 mg orl man	Merck 7th Ed.
Anticataract	
Anticlastogen	
Anticonvulsant	Huang, K. C. 1993. <i>The Pharmacology of Chinese Herbs.</i> CRC Press, Boca Raton, FL 388 pp.
Antidementia	Bruneton, J. 1999. <i>Pharmacognosy, Phytochemistry, Medicinal Plants.</i> 2nd Ed. Lavoisier Publishing, Paris. 1119 pp.
Antidermatitic	Bisset, N.G., ed. 1994. <i>Herbal Drugs and Phytopharmaceuticals.</i> CRC Press. Boca Raton, FL. 566 pp.
Antidiabetic	Jin, G-Z., Yamagata, Y., and Tomita, K.-i. 1989. Structure of Rutin Pentamethanol. <i>Chem. Pharm. Bull.</i> 38(2): 297-300, 1990.
Antiedemic 270 mg/day orl man	
Antierythemic	
Antifeedant	
Antiglaucomic 60 mg/day	Werbach, M. 1993. <i>Healing with Food.</i> Harper Collins, New York, 443 pp.
Antihematuric	
Antihemorrhoidal	
Antihepatotoxic	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.
Antiherpetic	<i>Economic & Medicinal Plant Research</i> , 5: 198.
Antihistaminic	
Antihypertensive	Huang, K. C. 1993. <i>The Pharmacology of Chinese Herbs.</i> CRC Press, Boca Raton, FL 388 pp.
Antiinflammatory 20 mg/kg	
Antimalarial IC50=>100 ug/ml	Khalid, S.A., Farouk, A., Geary**, T.G., and Jensen, J.B. 1985. Potential Antimalarial Candidates From African Plants: An In Vitro Approach Using Plasmodium falciparum*. <i>Journal of Ethnopharmacology</i> , 15: 201-209, 1986.
Antimelanomic	
Antimetastatic	
Antimutagenic ID50=2-5 nM	
Antinephritic	
Antinociceptive	
Antioxidant IC28=30 ppm	
Antioxidant IC50=120 uM	
Antioxidant IC54=10 uM	
Antiperoxidant IC50=10-20 uM	
Antiplatelet	
Antiproliferant 50-75 uM/l	
Antiprotozoal	
Antipurpuric	
Antiradicular 9 x quercetin	
Antispasmodic	
Antisunburn	
Antithrombogenic EC50=500 nM	
Antithyroid IC50=68 uM	
Antitrypanosomic 100 mg/kg	<i>Planta Medica</i> , 57: A44, 1991.
Antitumor	
Antitumor-Promoter	
Antiulcer	
Antivaricose	
Antiviral	
Apoptotic 75 uM/l	
Cancer-Preventive	Stitt, P. A. <i>Why George Should Eat Broccoli.</i> Dougherty Co, Milwaukee, WI, 1990, 399 pp.
Capillariprotective	Merck 11th Edition
Catabolic	
Chemopreventive	
Cytoprotective IC50=3 uM	
Estrogenic?	<i>Economic & Medicinal Plant Research</i> , 6: 189.
Hemostat	
Hepatomagenic 20,000 ppm (diet) rat	<i>Phenolic Compounds in Food and Their Effects on Health. Antioxidants & Cancer Prevention.</i> Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. ACS Symposium Series 507.ACS, Washington 402 pp.

Hepatoprotective 20 mg/kg rat	
Hypocholesterolemic	Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp.
Hypotensive	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
Immunomodulator	
Insecticide	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.
Insectiphile	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Juvabional	Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990.
Larvostat IC95=4,000-8,000 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.
Lipoxygenase-Inhibitor IC75=2.5 mM	Oszmianski, J. and Lee, C.Y. 1990. Inhibitory Effect of Phenolics on Carotene Bleaching in Vegetables. J. Agric. Food Chem. 38: 688-690.
Mutagenic	Economic & Medicinal Plant Research, 6: 189.
Myoprotective	
Myorelaxant	Economic & Medicinal Plant Research, 6: 189.
Oviposition-Stimulant	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
PAF-Inhibitor	
Pesticide	
Protisticide	
Radioprotective	
Sunscreen	
Topoisomerase-II-Inhibitor IC50=1 ug/ml	Bernard, F. X., Sable, S., Cameron, B., Provost, J., Desnottes, J. F., Crouzet, J., Blanche, F. 1997. Glycosylated Flavones as Selective Inhibitors of Topoisomerase IV. Antimicrobial Agents & Chemotherapy, 41: 992-998.
Vasodilator	
Vasopressor	
cAMP-Phosphodiesterase-Inhibitor	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).

SILICON Plant -- -- *

Activities (4)	
Antiarteriosclerotic	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Antionychyotic	
Antiosteoporotic	
Cardioprotective	

TANNIN Plant -- -- *

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/ml	
Antioxidant 1/3 quercetin	
Antiradicular 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- Inhibitor	
Glucosyl- Transférase-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	

TAXIFOLIN

Plant

--

--

*

Activities (17)

Aldose-Reductase-Inhibitor 60 uM pig	Haraguchi, H., Ohmi, I., Masuda, H., Tamura, Y., Mizutani, K., Tanaka, O., Chou, W. H. 1996. Inhibition of Aldose Reductase by Dihydroflavonols in <i>Engelhardtia chrysolepis</i> and Effects on Other Enzymes. <i>Experientia</i> , 52(6): 564-567.
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.
Anticomplementary 1/3 aspirin	
Antihepatotoxic	Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants.</i> Taylor & Frost, London. 791 pp.
Antiherpetic	<i>Economic & Medicinal Plant Research</i> , 5: 198.
Antiinflammatory	Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants.</i> Taylor & Frost, London. 791 pp.
Antimutagenic	<i>Economic & Medicinal Plant Research</i> , 6: 235.
Antioxidant	Nigg, H.N. and Seigler, D.S., eds. 1992. <i>Phytochemical Resources for Medicine and Agriculture.</i> Plenum Press, New York. 445 pp.
Antitumor	
Antiviral	
Cancer-Preventive	Stitt, P. A. <i>Why George Should Eat Broccoli.</i> Dougherty Co, Milwaukee, WI, 1990, 399 pp.
Fungicide	Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants.</i> Taylor & Frost, London. 791 pp.
Hepatoprotective	<i>Advance in Chinese Medicinal Materials Research.</i> 1985. Eds. H. M. Chang, H. W. Yeung, W. -W. Tso and A. Koo. World Scientific Publishing Co., Philadelphia Pa., page 253.
Lipoxygenase-Inhibitor	Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants.</i> Taylor & Frost, London. 791 pp.
Oxidase-Inhibitor	Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants.</i> Taylor & Frost, London. 791 pp.
Pesticide	
RNA-genic	Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants.</i> Taylor & Frost, London. 791 pp.

URONIC-ACID

Plant

--

--

*