

List of All Chemicals

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Acacia tortilis (Fabaceae)

Common name(s)

Umbrella Thorn

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
(+)-CATECHOL	Plant		--	--		*
Activities (4)						
Antihepatitic			Martindale's 29th			
Antiseptic						
Fatal			Martindale's 29th			
Pesticide						
(+)-GALLOCATECHOL	Plant		--	--		*
4-HYDROXY-PIPECOLIC-ACID	Seed		--	--		*
ALDOBIOURONIC-ACID	Gum		--	--		*
APIGENIN-6,8-BIS-C-GLUCOSIDE	Leaf		--	--		*
ASH	Fruit		51000.0	57000.0	0.01	*
ASH	Seed		--	59000.0	0.33	*
ASH	Leaf		--	87000.0	-0.56	*
BETULIN	Stem Bark		--	--		Jim Duke's personal files.
Activities (13)						
AntiHIV 6.1 uM						
Anticarcinomic						
Antifeedant						
Antiflu						
Antiinflammatory			Recio, M., et al. 1994. Investigations on the Steroidal Anti-Inflammatory Activity of Triterpenoids from Diospyros leucomelas*. Planta Medica, 61: 9.			
Antitumor			Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.			
Antiviral 6.1 uM						
Aphidifuge			Lugemwa, F.N., Huang, F-Y., Bentley, M.D., Mendel, M.J., and Alford, A.R. 1990. A Heliothis zea Antifeedant from the Abundant Birchbark Triterpene Betulin. J. Agric. Food Chem. 38(2): 493-494.			
Cytotoxic 600 ppm						
Cytotoxic 8.6 uM						
Hypolipemic						
Prostaglandin-Synthesis-Inhibitor IC50=119 uM			Huang, C., Tunon, H., Bohlin, L. 1995. Anti-Inflammatory Compounds Isolated from Menyanthes trifoliata L. Yao Hsueh Hsueh Pao, 30(8): 621-626.			
Topoisomerase-II-Inhibitor IC50=38.6 uM						
BETULIN	Heart Wood		--	--		Jim Duke's personal files.

Activities (13)					
AntiHIV 6.1 uM					
Anticarcinomic					
Antifeedant					
Antiflu					
Antiinflammatory		Recio, M., et al. 1994. Investigations on the Steroidal Anti-Inflammatory Activity of Triterpenoids from Diospyros leucomelas*. Planta Medica, 61: 9.			
Antitumor		Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.			
Antiviral 6.1 uM					
Aphidifuge		Lugemwa, F.N., Huang, F-Y., Bentley, M.D., Mendel, M.J., and Alford, A.R. 1990. A Heliothis zea Antifeedant from the Abundant Birchbark Triterpene Betulin. J. Agric. Food Chem. 38(2): 493-494.			
Cytotoxic 600 ppm					
Cytotoxic 8.6 uM					
Hypolipemic					
Prostaglandin-Synthesis-Inhibitor IC50=119 uM		Huang, C., Tunon, H., Bohlin, L. 1995. Anti-Inflammatory Compounds Isolated from Menyanthes trifoliata L. Yao Hsueh Hsueh Pao, 30(8): 621-626.			
Topoisomerase-II-Inhibitor IC50=38.6 uM					

CALCIUM	Seed	--	5600.0	0.27	*
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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					

CALCIUM	Leaf	--	22700.0	0.29	*
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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.				
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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					
CALCIUM	Fruit	--	7900.0	0.93	*

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	Seed	--	506000.0	-0.07	*
CARBOHYDRATES	Leaf	--	660000.0	0.38	*

CARBOHYDRATES	Fruit	462500.0	739000.0	-0.23	*
DJENKOLIC-ACID	Seed	--	--		*
FAT	Seed	--	60000.0	-1.08	*
FAT	Leaf	--	61000.0	0.09	*
FAT	Fruit	24400.0	31000.0	-0.4	*
FIBER	Seed	--	109000.0	-0.2	*
<div> <div>Activities (15)</div> <div> <div>Angiotensin-Receptor-Blocker</div> <div>Antidiabetic</div> <div>Antihypertensive</div> <div>Antiobesity</div> <div>Antitumor</div> <div>Antiucler</div> <div>Beta-Blocker</div> <div>Cancer-Preventive</div> <div>Cardioprotective</div> <div>Diuretic</div> <div>Hypocholesterolemic</div> <div>Hypotensive 10 g/man/day/orl</div> <div>Hypouricemic</div> <div>Laxative</div> <div>Vasodilator</div> </div> <div> <div>Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).</div> <div>Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).</div> <div>Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.</div> <div>Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).</div> </div> </div>					
FIBER	Leaf	--	116000.0	-0.56	*
<div> <div>Activities (15)</div> <div> <div>Angiotensin-Receptor-Blocker</div> <div>Antidiabetic</div> <div>Antihypertensive</div> <div>Antiobesity</div> <div>Antitumor</div> <div>Antiucler</div> <div>Beta-Blocker</div> <div>Cancer-Preventive</div> <div>Cardioprotective</div> <div>Diuretic</div> <div>Hypocholesterolemic</div> <div>Hypotensive 10 g/man/day/orl</div> <div>Hypouricemic</div> <div>Laxative</div> <div>Vasodilator</div> </div> <div> <div>Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).</div> <div>Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).</div> <div>Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.</div> <div>Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).</div> </div> </div>					
FIBER	Fruit	201000.0	248000.0	1.0	*
<div> <div>Activities (15)</div> <div> <div>Angiotensin-Receptor-Blocker</div> <div>Antidiabetic</div> <div>Antihypertensive</div> <div>Antiobesity</div> <div>Antitumor</div> <div>Antiucler</div> <div>Beta-Blocker</div> <div>Cancer-Preventive</div> <div>Cardioprotective</div> <div>Diuretic</div> <div>Hypocholesterolemic</div> <div>Hypotensive 10 g/man/day/orl</div> <div>Hypouricemic</div> <div>Laxative</div> <div>Vasodilator</div> </div> <div> <div>Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).</div> <div>Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).</div> <div>Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.</div> <div>Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).</div> </div> </div>					

FLAVONOIDS	Leaf	22000.0	63000.0	1.63	*
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	Neuwinger, 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

HCN	Leaf	--	--		*
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Activities (9)					
Antiasthmatic	Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp.				
Antidote Ihl (=Amyl Nitrite)	Martindale's 29th				
Antitussive	Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp.				
Bronchosedative	Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp.				
Insecticide	Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990.				
Pesticide					
Respirastimulant	Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp.				
Rodenticide	Martindale's 29th				
Vasomotor-Stimulant					

ISORHAMNETIN-3-RUTINOSIDE	Leaf	--	--		*
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Activities (2)					
Antibacterial (Synergist)	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.				
Pesticide					

LUTEOLIN-7-GLUCOSIDE	Leaf	--	--		*
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Activities (7)					
Aldose-Reductase-Inhibitor IC73=10 uM					
Aldose-Reductase-Inhibitor IC31=1 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.				
Antidermatic	Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.				
Antiherpetic	Economic & Medicinal Plant Research, 5: 204.				
Antiinflammatory	Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.				
Antiviral	Economic & Medicinal Plant Research, 5: 204.				
Pesticide					

MYRICETIN-4'-METHYLETHER-3-RHAMNOSIDE	Leaf	--	--		*
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N-ACETYLDJENKOLIC-ACID	Seed	--	--		*
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PHOSPHORUS	Seed	--	7300.0	0.51	*
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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.				

PHOSPHORUS	Leaf	--	1700.0	-0.6	*
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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.				

PHOSPHORUS	Fruit	--	3400.0	0.06	*
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.				
PIPECOLIC-ACID	Leaf	--	--		*
Activities (2)					
Herbistat	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.				
Pesticide					
PROTEIN	Seed	--	378000.0	1.28	*
PROTEIN	Leaf	--	192000.0	-0.2	*
PROTEIN	Fruit	173000.0	188300.0	1.06	*
QUERCETIN-3'-GLUCOSIDE	Leaf	--	--		*
Activities (2)					
Antibacterial					
Pesticide					
QUERCETIN-3-O-RUTINOSIDE	Leaf	--	--		*
QUERCETIN-4'-GLUCOSIDE	Leaf	--	--		*
Activities (1)					
Quinone-Reductase-Inducer 30 uM	Willaimason, G., Plumb, G. W., Uda, Y., Price, K. R., Rhodes, M. J. C. 1996. Dietary Quercetin Glycosides: Antioxidant Activity and Induction of the Anticarcinogenic Phase II Marker Enzyme Quinone Reductase in Hepalclc7 Cells. Carcinogenesis 17(11): 2385.				
TANNIN	Leaf	--	--		*

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- 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				
TANNIN	Bark	--	--	*

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-
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