

# List of All Chemicals

## **P** Phellodendron amurense (Rutaceae)

### Common name(s)

Po Mu; Huang Bai; Huang Po; Amur Cork Tree

### 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 ▾	Low PPM	High PPM	StdDev	*Reference
7-DEHYDROSTIGMASTEROL	Bark	--	--		*
AMURENSINE	Leaf	400.0	10000.0		*

#### Activities (3)

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

BERBERINE	Bark	8300.0	10000.0	-1.0	*
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#### Activities (130)

(+)-Inotropic	Mills, Simon and Bone, Kerry. 2000. Phytotherapy. Churchill Livinston, Edinburgh.
Abortifacient	
Adrenolytic	Mills, Simon and Bone, Kerry. 2000. Phytotherapy. Churchill Livinston, Edinburgh.
Amebicide 200 ug/ml	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Amebicide EC83=100 ug/ml ori rat	Mills, Simon and Bone, Kerry. 2000. Phytotherapy. Churchill Livinston, Edinburgh.
Analgesic	
Anesthetic	
Antiacetylcholinesterase	
Antiacne	Mills, Simon and Bone, Kerry. 2000. Phytotherapy. Churchill Livinston, Edinburgh.
Antiadrenergic	Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp.
Antiaggregant	
Antialzheimeran	
Antiamnesic	Mills, Simon and Bone, Kerry. 2000. Phytotherapy. Churchill Livinston, Edinburgh.
Antiangiogenic	
Antiarrhythmic	
Antiarthritic	
Antibacillus MIC=200 ug/ml	
Antibacterial 100 mg/4x/day	
Antibacterial 12.5-2,500 ug/ml	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Antibacterial MIC=6-630 ug/ml	
Antibiotic	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Anticancer	
Anticariogenic	Mills, Simon and Bone, Kerry. 2000. Phytotherapy. Churchill Livinston, Edinburgh.
Antichlamydia	
Anticholecystitic 5-20 mg/3x/day/ori	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Anticholera 150 mg/man/day	Martindale's 28th
Anticirrhotic	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Anticonjunctivitic 0.20%	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Anticonvulsant	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.
Antidiarrheic 100 mg/4x/day	
Antidysenteric 100 mg/4x/day	
Antiedemic	Mills, Simon and Bone, Kerry. 2000. Phytotherapy. Churchill Livinston, Edinburgh.
Antientotoxic	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
Antienterotoxic	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).

Antiesherichic	
Antigiardial 10 mg/kg/day	
Antiglaucomic	
Antigonorrhoea	
Antihepatomic	Mills, Simon and Bone, Kerry. 2000. <i>Phytotherapy</i> . Churchill Livinston, Edinburgh.
Antihepatotic	
Antiherpetic	
Antihistaminic	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.
Antiinflammatory	
Antiischemic	Mills, Simon and Bone, Kerry. 2000. <i>Phytotherapy</i> . Churchill Livinston, Edinburgh.
Antileishmanic 10 ug/ml	
Antilipogenic IC63=10 uM	Mills, Simon and Bone, Kerry. 2000. <i>Phytotherapy</i> . Churchill Livinston, Edinburgh.
Antimalarial 0.14-0.36 ug/ml	
Antimalarial 50 uM	
Antimitotic	Mills, Simon and Bone, Kerry. 2000. <i>Phytotherapy</i> . Churchill Livinston, Edinburgh.
Antimuscarinic	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.
Antimyalgic	
Antimycotic	Mills, Simon and Bone, Kerry. 2000. <i>Phytotherapy</i> . Churchill Livinston, Edinburgh.
Antineoplastic	
Antinephritic	
Antiperistaltic	Bruneton, J. 1999. <i>Pharmacognosy, Phytochemistry, Medicinal Plants</i> . 2nd Ed. Lavoisier Publishing, Paris. 1119 pp.
Antipharyngitic	Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf).
Antiphotooxidative	
Antiplasmodial IC50=0.14-0.36 ug/ml	
Antipneumonic	Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf).
Antipyretic 3 x aspirin	
Antisalmonella	
Antisecretory	
Antiseptic 25 ug/ml	
Antishigellitic 12.5 ug/ml	Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf).
Antispasmodic	Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp.
Antispermigenic	
Antistaphylococcic	
Antistrep	Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf).
Antisyphilitic	
Antitrachomic 0.20%	
Antitrypanosomic	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.
Antitubercular MIC=25 ug/ml	
Antitumor (brain) IC91=150 ug/ml	Werbach & Murray, 1994.
Antiulcer	
Antivaginitic	Huang, K. C. 1993. <i>The Pharmacology of Chinese Herbs</i> . CRC Press, Boca Raton, FL 388 pp.
Antiviral	Huang, K. C. 1993. <i>The Pharmacology of Chinese Herbs</i> . CRC Press, Boca Raton, FL 388 pp.
Astringent	
Bilirubinolytic	
COX-2-Inhibitor 100 ug/ml	
Calcium-Antagonist	Mills, Simon and Bone, Kerry. 2000. <i>Phytotherapy</i> . Churchill Livinston, Edinburgh.
Candidicide	
Cardiodepressant	Huang, K. C. 1993. <i>The Pharmacology of Chinese Herbs</i> . CRC Press, Boca Raton, FL 388 pp.
Cardiotonic	
Carminative	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.
Cholagogue	
Cholekinetic	
Choleretic	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.
Collyrium	
Cyclooxygenase-Inhibitor	
Cytotoxic	Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp.
Digestive	
Diuretic	
Emetic	
Fungicide 12.5-150 ug/ml	Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf).
Glaucomagenic	
Hemostat	

Hypocholesterolemic	Ivorra, M.D., Paya, M., and Villar, A. 1989. A Review of Natural Products and Plants as Potential Antidiabetic Drugs. <i>Journal of Ethnopharmacology</i> , 27: 243-275, 1989.
Hypoglycemic	
Hypotensive	
Immunostimulant	
Lachrymatory	Mills, Simon and Bone, Kerry. 2000. <i>Phytotherapy</i> . Churchill Livinston, Edinburgh.
Larvicide 9 ppm	
Leucocytogenic	
Lipase-Inhibitor	Medline (post 1990 searches filed in my computer)
Lipoxygenase-Inhibitor IC50=118 uM	
Mutagenic	
Mycobactericide MIC=25-50 ug/ml	
Mydriatic	Mills, Simon and Bone, Kerry. 2000. <i>Phytotherapy</i> . Churchill Livinston, Edinburgh.
Myocardiodepressant	
Myorelaxant	
Pesticide	
Phototoxic 9 ppm	
Plasmodicide IC50=0.14-0.36 ug/ml	
Prostaglandin-Synthesis- Inhibitor 25 mg/kg ivn rbt	Huang, C. G., Chu, Z. L., Yang, Z. M. 1991. Effect of Berberine on Synthesis of Platelet TXA2 and Plasma PGI2 in Rabbits. <i>Chung-Kuo Yao Li Hsueh Pao</i> , 12(6): 526-528.
Protisticide IC50=0.14-0.36 ug/ml	
RNA-Depressant	
RT-Inhibitor	
Respiradepressant	Martindale's 28th
Sedative	
Stomachic	
Topoisomerase-II-Inhibitor 2.5 uM	Kobayashi, Y, Yamashita, Y., Fujii, N., Takaboshi, K., Kawakami, T., Kawamura, M., Mizukami, T., Nakano, H. 1995. Inhibitors of DNA Topoisomerase I and II Isolated From the <i>Coptis</i> Rhizomes. <i>Planta Medica</i> , 61: 414-418.
Trichomonicide	Martindale's 29th
Trypanocide	
Uterocontractant	
Uterotonic	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.
Vagostimulant man	
Vasoconstrictor	
Vasodilator 2 mg/kg cat	
Vermifuge	
Vibriofuge	

BETA-SITOSTEROL

Bark

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**Activities (47)**

Androgenic	
Angiogenic	
Anorexic	Martindale's 28th
Antiadenomic	Merck 11th Edition
Antiandrogenic	Malini, T. and Vanithakumari, G. 1989. Rat Toxicity Studies With B-Sitosterol. <i>Journal of Ethnopharmacology</i> , 28: 221-234, 1990.
Antibacterial	Recently became <i>Internat. J. Crude Drug Res.</i> 28(1,2,3,4):1990, page 155.
Anticancer (Breast)	Madhavi, D. L., Bomser, J., Smith, M., Singletary, K. 1998. Isolation of Bioactive Constituents from <i>Vaccinium myrtillus</i> (Bilberry) Fruits and Cell Cultures. <i>Plant Sci.</i> , 131(1): 95-103.
Anticancer (Cervix)	
Anticancer (Lung)	
Antiedemic IC54=320 mg/kg orl	
Antiestrogenic	Malini, T. and Vanithakumari, G. 1989. Rat Toxicity Studies With B-Sitosterol. <i>Journal of Ethnopharmacology</i> , 28: 221-234, 1990.
Antifeedant	Jacobson, M., <i>Glossary of Plant-Derived Insect Deterrents</i> , CRC Press, Inc., Boca Raton, FL, 213 p, 1990.
Antifertility	Malini, T. and Vanithakumari, G. 1989. Rat Toxicity Studies With B-Sitosterol. <i>Journal of Ethnopharmacology</i> , 28: 221-234, 1990.
Antigonadotrophic	Malini, T. and Vanithakumari, G. 1989. Rat Toxicity Studies With B-Sitosterol. <i>Journal of Ethnopharmacology</i> , 28: 221-234, 1990.
Antihyperlipoproteinaemic	Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp.
Antiinflammatory	
Antileukemic	
Antilymphomic	
Antimutagenic 250 ug/ml	
Antiophidic 2.3 mg mus	<i>Economic &amp; Medicinal Plant Research</i> , 5: 363.
Antioxidant IC44=10 uM	
Antiprogestational	Malini, T. and Vanithakumari, G. 1989. Rat Toxicity Studies With B-Sitosterol. <i>Journal of Ethnopharmacology</i> , 28: 221-234, 1990.
Antiprostaglandin 30 mg/day/12 wks	
Antiprostataadenomic	Merck 11th Edition
Antiprostatic 10-20 mg 3 x/day/orl man	
Antipyretic	Neuwinger, H. D. 1996. <i>African Ethnobotany - Poisons and Drugs</i> . Chapman & Hall, New York. 941 pp.
Antitumor (Breast)	Madhavi, D. L., Bomser, J., Smith, M., Singletary, K. 1998. Isolation of Bioactive Constituents from <i>Vaccinium myrtillus</i> (Bilberry) Fruits and Cell Cultures. <i>Plant Sci.</i> , 131(1): 95-103.
Antitumor (Cervix)	
Antitumor (Lung)	
Antiviral	Abid Ali Khan, M.M., Jain, D.C., Bhakuni, R.S., Zaim, M., and Thakur, R.S. 1991. Occurrence of some antiviral sterols in <i>Artemisia annua</i> . <i>Plant Science</i> , 75: 161-165, 1991.
Apoptotic	
Artemicide LC50=110 ppm	Jung, J.H., Pummangura, S., Chaichantipyuth, c., Patarapanich, C., and McLaughlin, J.L. 1989. Bioactive Constituents of <i>Melodorum fruticosum</i> . <i>Phytochemistry</i> . 29(5): 1667-1670. 1990.
Cancer-Preventive	Stitt, P. A. <i>Why George Should Eat Broccoli</i> . Dougherty Co, Milwaukee, WI, 1990, 399 pp.
Candidicide	Recently became <i>Internat. J. Crude Drug Res.</i> 28(1,2,3,4):1990, page 155.
Caspase-8-Inducer	
Estrogenic	
Febrifuge	Neuwinger, H. D. 1996. <i>African Ethnobotany - Poisons and Drugs</i> . Chapman & Hall, New York. 941 pp.
Gonadotrophic	Malini, T. and Vanithakumari, G. 1989. Rat Toxicity Studies With B-Sitosterol. <i>Journal of Ethnopharmacology</i> , 28: 221-234, 1990.
Hepatoprotective	
Hypocholesterolemic 2-6 g/man/day/orl	Martindale's 30th
Hypocholesterolemic 9-3,330 mg/man/day/orl	Martindale's 28th
Hypoglycemic	Ivorra, M.D., Paya, M., and Villar, A. 1989. A Review of Natural Products and Plants as Potential Antidiabetic Drugs. <i>Journal of Ethnopharmacology</i> , 27: 243-275, 1989.
Hypolipidemic 2-6 g/day	
Pesticide	
Spermicide	Malini, T. and Vanithakumari, G. 1989. Rat Toxicity Studies With B-Sitosterol. <i>Journal of Ethnopharmacology</i> , 28: 221-234, 1990.
Ubiquitot	Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp.
Ulcerogenic 500 mg/kg ipr rat	

CALCIUM

Bark

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14100.0

-0.44

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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	

**CAMPESTEROL**

Bark -- -- \*

**Activities (2)**

Antioxidant IC37=10 uM	
Hypocholesterolemic	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.

**CANDICINE**

Bark -- -- \*

**Activities (4)**

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

**COPPER**

Bark -- 6.0 -0.53 \*

**Activities (12)**

Antianemic	
Antiarthritic	
Antidiabetic 2-4 mg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antifatigue	
Antiinflammatory	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antinociceptive	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antiosteoporotic	
Cardioprotective	
Contraceptive	Martindale's 28th
Hypocholesterolemic	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Immunomodulator	
Schizophrenigenic	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.

**DIHYDROPHELLOSIDE**

Fruit -- -- \*

**EO**

Fruit -- -- \*

**FAT**

Cr -- 517000.0 \*

FAT	Plant	--	517000.0	6.79	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
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FLAVONOIDS	Fruit	--	100000.0	1.73	*
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GUANIDINE	Bark	--	--		*
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**Activities (6)**

Antimyasthenic 10-35 mg/kg/day

Convulsant

Hepatotoxic

Hypertensive

Hypoglycemic

Myostimulant

Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.

HYPERIN	Fruit	--	--		*
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**Activities (14)**

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

Antibacterial

Antiinflammatory

Antischematic

Antioxidant

Antiradicular

Antitussive

Antiviral

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

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

Diuretic

Hepatoprotective IC80=30 ug/ml Mayumi Ito (nee Someya), et al. 1990. Hepatoprotective Compounds from *Canarium album* and *Euphorbia nematocypa*. Chem. Pharm. Bull. 38(8): 2201-2203, 1990.

Hypotensive

Pesticide

IRON	Bark	--	210.0	0.04	*
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**Activities (6)**

Antiakathitic Martindale's 29th

Antianemic Martindale's 29th

Anticancer

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

Antimenorrhagic 100 mg/day/wmn/orl Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).

Prooxidant

JATRORRHIZINE	Bark	--	--		*
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**Activities (13)**

Antiinflammatory

Antimalarial IC50=0.42-1.61 ug/ml

Antiphotooxidative

Antiplasmodial IC50=0.42-1.61 ug/ml

CNS-Depressant

CNS-Stimulant

Enterotonic

Fungicide 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.

Hypotensive 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.

Pesticide

Protisticide IC50=0.42-1.61 ug/ml

Sedative 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.

Uterocontractant Mills, Simon and Bone, Kerry. 2000. Phytotherapy. Churchill Livinston, Edinburgh.

**Activities (13)**

Antiinflammatory

Antimalarial IC50=0.42-1.61 ug/ml

Antiphotooxidative

Antiplasmodial IC50=0.42-1.61 ug/ml

CNS-Depressant

CNS-Stimulant

Enterotonic

Fungicide

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.

Hypotensive

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.

Pesticide

Protisticide IC50=0.42-1.61 ug/ml

Sedative

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.

Uterocontractant

Mills, Simon and Bone, Kerry. 2000. *Phytotherapy*. Churchill Livingstone, Edinburgh.**LIMONIN**

Plant

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**Activities (5)**

Anticatalleptic

Antifeedant

Jacobson, M., *Glossary of Plant-Derived Insect Deterrents*, CRC Press, Inc., Boca Raton, FL, 213 p, 1990.Antileukemic  
IC50=>10 ug/ml

Life Sciences 55: 1061.

Antimalarial  
IC50=>100 ug/mlKhalid, 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\*. *Journal of Ethnopharmacology*, 15: 201-209, 1986.

Pesticide

**MAGNESIUM**

Bark

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650.0

-0.75

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**Activities (65)**

AntiCFS

AntiLyme 400-1,000 mg

AntiMS

AntiPMS 400-800  
mg/day/wmn/orlAntiPMS 400-800  
mg/day/wmn orlAntiRaynaud'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

Challem, 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/dayAntidysmenorrheic 100 mg 4  
x/dayWerbach, 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

Antigastroic

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	
Antiplateque 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	

**MAGNOFLORINE**

Bark -- -- \*

**Activities (11)**

Antibacterial	
Antineuromuscular ED50=10 mg/kg	
Antispasmodic	Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp.
CNS-Depressant	Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp.
Curaroid <1% tubocurarine	Neuwinger, H. D. 1996. African Ethnobotany - Poisons and Drugs. Chapman & Hall, New York. 941 pp.
Hypotensive	
PAF-Inhibitor	
Paralytic	Neuwinger, H. D. 1996. African Ethnobotany - Poisons and Drugs. Chapman & Hall, New York. 941 pp.
Pesticide	
Toxic	Neuwinger, H. D. 1996. African Ethnobotany - Poisons and Drugs. Chapman & Hall, New York. 941 pp.
Vasodilator	Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp.

**MANGANESE**

Bark -- 20.0 -0.54 \*



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				

MENISPERINE	Bark	--	--	*
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Activities (2)				
Antineuromuscular				
Hypotensive				

METHYL-N-HEPTYL-KETONE	Fruit	--	--	*
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METHYL-N-NONYL-KETONE	Fruit	--	--	*
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MYRCENE	Fruit	--	--	*
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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., Paumgarten, 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., Paumgarten, 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 reviewed 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				

NOR-ICARISID(8-(3-BETA-GLUCOSIDE-OXYISOPENTYL)-KAEMPFEROL	Plant	--	--	*
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OBACULACTONE	Bark	--	--	*
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OBACUNONE	Bark	--	--	*
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Activities (3)					
Anticataleptic					
Antifeedant	Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990.				
Pesticide					

PALMATINE	Bark	--	--		*
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Activities (17)					
Abortifacient					
Adrenocorticotrophic					
Analgesic					
Antialzheimeran?	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.				
Antiarrhythmic					
Antibacterial					
Anticholinesterase	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.				
Antiinfarctal					
Antiinflammatory					
Antimalarial					
Antipyretic	Grenand, P., Moretti, C., and Jacquemin, H. 1987. Pharmacopees Traditionnelles en Guyane. l'ORSTROM, Paris. 569 pp.				
CNS-Depressant					
Hypotensive	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.				
Inotropic					
Pesticide					
Respiradepressant					
Uterotonic	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.				

PELLAMURETIN	Leaf	--	--		*
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PELLAMURINE	Leaf	--	--		*
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PELLATINE	Leaf	--	--		*
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PELLAVINE	Leaf	--	--		*
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PHELLODENDRINE	Bark	--	--		*
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PHELLODENDROSIDE	Plant	--	--		*
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PHELLOSIDE	Fruit	--	--		*
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POTASSIUM	Bark	--	4370.0	-0.35	*
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Activities (14)					
Angiotensin-Receptor-Blocker					
Antiarrhythmic	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.				
Antidepressant	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.				
Antifatigue	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.				
Antihypertensive					
Antispasmodic	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.				
Antistroke					
Anxiolytic					
Beta-Blocker					
Cardioprotective 3,000-5,000 mg					
Cardiotoxic 18,000 mg/man/day					
Diuretic					
Hypotensive					
Vasodilator					

PROTEIN	Seed	--	358000.0	1.1	*
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SODIUM	Bark	--	55.0	-0.46	*
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Activities (1)					
Hypertensive	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.				

ZINC	Bark	--	26.0	1.27	*
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**Activities (77)**

ACE-Inhibitor	
Analgesic	
AntiBPH 25-60 mg/day	
AntiCrohn's	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
AntiHIV	
Antiacne 135 mg/day	
Antiacrodermatitic 8-34 mg/day/orl/chd	Martindale's 29th
Antialcoholic	
Antialopepic	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Antialzheimeran 50 mg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antiangiogenic	
Antianorexic	Martindale's 29th
Antiarthritic 50 mg/3x/day/orl/man	
Anticanker 100 mg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Anticataract 30 mg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Anticoeliac	Martindale's 28th
Anticold 50 mg	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Anticolitic	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Anticoronary 30 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
Antidandruff	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Antidementia	
Antidiabetic 30 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
Antidote (Cadmium)	Let's Live, May 1989.
Antidysgeuzic	
Antieczemic 150 mg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antiencephalopathic	Martindale's 29th
Antiepileptic 100 mg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antifibrotic 30 mg	
Antifuruncular 45 mg/3x/day/man	Martindale's 28th
Antihangover 15 mg	
Antiherpetic? 25-60 mg/day	
Antiimpotence	Martindale's 29th
Antiinfective 50 mg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antiinfertility 60 mg/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.
Antileptic	Martindale's 29th
Antileukonychic	
Antilymphomic	
Antimaculitic	
Antimetastatic	
Antineuropathic	
Antinyctalopic	
Antiobesity 30 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
Antiosteoporotic	
Antiperiodontitic	
Antiplaque	Martindale's 29th
Antiprolactin	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Antiprostatic 50 mg/man/day/orl	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Antirheumatic	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Antiseptic 50 mg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antispare-Tire 30 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
Antistomatitic 50 mg/man/3x/day	Martindale's 28th
Antisyndrome-X 30 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
Antitinnitic 60-120 mg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antitriglyceride 30 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
Antiulcer 50 mg/3x/day/man	Martindale's 28th
Antiulcer 88 mg/rat/day/15 days	
Antiviral?	Martindale's 29th
Astringent	Martindale's 28th
Collagenic	

Copper-Antagonist	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
Deodorant	Martindale's 29th
Detoxicant (Alcohol)	
Ergogenic	
Hypotensive 30 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
Immunomodulator	
Immunostimulant	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Immunosuppressant 300 mg/day/6 wks/orl/man	Martindale's 29th
Insulinogenic 30 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
Leptingenic 30-60 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
Mucogenic	Li, K.M. Effect of zinc sulphate on acetic acid-induced gastric ulceration in rats. J. Pharm. Pharmacol. 42: 657-659, 1990.
NF-kB-Inhibitor	
Pesticide	
Spermigenic 60 mg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Testosteronigenic 60 mg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Trichomonicide	Martindale's 29th
Vulnerary	Martindale's 28th