

List of All Chemicals

P Frangula purshiana (Rhamnaceae)

Common name(s)

Cascara Sagrada; Cascara Buckthorn

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 | Low PPM | High PPM | StdDev | *Reference |
|--|---|---------|----------|--------|------------|
| | All parts ... | | | | |
| 1,6,8-TRIHYDROXY-3-METHYL-9-GLUCOSYL-ANTHRAQUINONE | Plant | -- | -- | | * |
| 10-HYDROXYALOIN-A | Bark | -- | -- | | * |
| 10-HYDROXYALOIN-B | Bark | -- | -- | | * |
| 11-DEOXYBARBALOIN | Bark | -- | -- | | * |
| ALOE-EMODIN | Tissue Culture | -- | -- | | * |
| Activities (24) | | | | | |
| Antibacterial MIC=2-64 ug/ml | | | | | |
| Antiherpetic | | | | | |
| Antileukemic | | | | | |
| Antisalmonella | Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp. | | | | |
| Antiseptic MIC=2-64 ug/ml | | | | | |
| Antistaphylococcic MIC=2-64 ug/ml | | | | | |
| Antitumor 1 ug/mL | | | | | |
| Antiviral | | | | | |
| Arylamine-N-Acetyltransferase-Inhibitor | | | | | |
| Calcium-Antagonist (strong activity) | | | | | |
| Candidicide MIC=25-250 ug/ml | | | | | |
| Cathartic | Merck 11th Edition | | | | |
| Cytotoxic 20 ppm | | | | | |
| Estrogenic | | | | | |
| Fungicide MIC=25-250 ug/ml | | | | | |
| Genotoxic | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. | | | | |
| Laxative | | | | | |
| Mutagenic | | | | | |
| Pesticide | | | | | |
| Purgative ED50=>59.6 mg/kg orl mus | | | | | |
| Termitifuge | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. | | | | |
| Topoisomerase-II-Inhibitor 1 mM | Muller, S. O., Eckert, I., Lutz, W. K., Stopper, H. 1996. Genotoxicity of the Laxative Drug Components Emodin, Aloe-emodin and Danthron in Mammalian Cells: Topoisomerase II Mediated? Mutat Res, 371: 165-173. | | | | |
| Topoisomerase-II-Inhibitor IC50=741 uM/ml | Mueller, S. O., Stopper, H. 1999. Characterization of the Genotoxicity of Anthraquinones in Mammalian Cells. Biochimica & Biophysica Acta, 1428: 406-414. | | | | |
| Tuberculostatic | Pakistan Encyclopedia Planta Medica. 1986. | | | | |
| ALOE-EMODIN | Bark | -- | -- | | * |

Activities (24)

| | |
|---|---|
| Antibacterial MIC=2-64 ug/ml | |
| Antiherpetic | |
| Antileukemic | |
| Antisalmonella | Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp. |
| Antiseptic MIC=2-64 ug/ml | |
| Antistaphylococic MIC=2-64 ug/ml | |
| Antitumor 1 ug/mL | |
| Antiviral | |
| Arylamine-N-Acetyltransferase-Inhibitor | |
| Calcium-Antagonist (strong activity) | |
| Candidicide MIC=25-250 ug/ml | |
| Cathartic | Merck 11th Edition |
| Cytotoxic 20 ppm | |
| Estrogenic | |
| Fungicide MIC=25-250 ug/ml | |
| Genotoxic | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Laxative | |
| Mutagenic | |
| Pesticide | |
| Purgative ED50=>59.6 mg/kg orl mus | |
| Termitifuge | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Topoisomerase-II-Inhibitor 1 mM | Muller, S. O., Eckert, I., Lutz, W. K., Stopper, H. 1996. Genotoxicity of the Laxative Drug Components Emodin, Aloe-emodin and Danthron in Mammalian Cells: Topoisomerase II Mediated? Mutat Res, 371: 165-173. |
| Topoisomerase-II-Inhibitor IC50=741 uM/ml | Mueller, S. O., Stopper, H. 1999. Characterization of the Genotoxicity of Anthraquinones in Mammalian Cells. Biochimica & Biophysica Acta, 1428: 406-414. |
| Tuberculostatic | Pakistan Encyclopedia Planta Medica. 1986. |

ALOE-EMODIN-8-MONO-BETA-GLUCOSIDE Bark -- -- *

ALOE-EMODIN-8-O-BETA-D-GLUCOSIDE Bark -- -- *

ALOE-EMODIN-DIMER Bark -- 1300.0 *

ALOIN Plant -- -- *

Activities (12)

| | |
|----------------------------------|---|
| Allergenic? | |
| Antifertility 62.5 mg/kg/day | |
| Antiherpetic | |
| Antispermatogetic 62.5 mg/kg/day | |
| Antiviral | |
| Cholagogue | Pakistan Encyclopedia Planta Medica. 1986. |
| Hypothermic | Pakistan Encyclopedia Planta Medica. 1986. |
| Laxative 13-60 mg/man | Martindale's 28th |
| Peristaltic | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| Pesticide | |
| Purgative | Merck 11th Edition |
| Uricosuric | Pakistan Encyclopedia Planta Medica. 1986. |

ALUMINUM Bark 27.0 99.0 -0.42 *

Activities (5)

| | |
|-----------------|--|
| Antisilicotic | Medicinal and Poisonous Plants of the Tropics. Leeuwenberg, A.J.M., ed. Pudoc, Wageningen. 1987. |
| Antivaginitic | Martindale's 28th |
| Candidicide | Martindale's 28th |
| Encephalopathic | Martindale's 29th |
| Pesticide | |

| | | | | | |
|-----------------------|--|---------|----------|-----|--|
| ANTHRANOL | Bark | -- | -- | | Mary, N. Y., Christensen, B. V., Beal, J. L. 1956. A Paper Chromatographic Study of Aloe, Aloin and Cascara sagrada. J. Amer. Pharm. Ass. Sci. Ed., 45: 229-232. |
| ANTHRAQUINONES | Bark | 60000.0 | 100000.0 | 1.0 | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| Activities (6) | | | | | |
| Antilithic | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). | | | | |
| Bird-Repellent | Merck 11th Edition | | | | |
| Carcinogenic | | | | | |
| Laxative | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). | | | | |
| Litholytic | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). | | | | |
| Toxic | Jim Duke's personal files. | | | | |

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|--|--|----|----|-------|---|
| ASCORBIC-ACID | Bark | -- | -- | -1.01 | * |
| Activities (112) | | | | | |
| Acidulant FEMA 6,000 | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry | | | | |
| Aldose-Reductase-Inhibitor | 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 | | | | |
| Analgesic 5-10 g/day | | | | | |
| Angiotensin-Receptor-Blocker | | | | | |
| AntiAGE 2,000 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 | | | | |
| AntiCFS 500-1,000 mg | | | | | |
| AntiCTS 1,000 mg 3x/day | | | | | |
| AntiCrohn's 50-100 mg/day/orl/man | Martindale's 29th | | | | |
| AntiLyme 500-2,000 mg | | | | | |
| AntiRaynaud's 500 mg 1-2x/day | | | | | |
| Antiaaggregant | 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 | | | | |
| Antiaging 400 mg/day | | | | | |
| Antiallergic | | | | | |
| Antialzheimeran 2,000-6,000 mg/day | | | | | |
| Antiarthritic 0.2-1 g/day | | | | | |
| Antiasthmatic 1,000 mg/day | Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp. | | | | |
| Antiatherosclerotic | | | | | |
| Antibacterial | Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp. | | | | |
| Anticataract 350 mg/day | Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp. | | | | |
| Anticataract 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 | | | | |
| Anticataract 1 g 3x/day | | | | | |
| Anticervicaldysplasic 1,000-2,000 mg/day | | | | | |
| Anticlimacteric 500-5,000 mg/day | | | | | |
| Anticold 1-2 g/man/day | | | | | |
| Antidecubitic 500 mg/man/2x/day | Martindale's 28th | | | | |
| Antidementia | | | | | |
| Antidepressant 2,000 mg/day | Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp. | | | | |
| Antidiabetic | 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 (Aluminum) | Economic & Medicinal Plant Research, 6: 189. | | | | |
| Antidote (Cadmium) | 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. | | | | |
| Antidote (Paraquat) | Martindale's 28th | | | | |
| Antieczemic 3.5-5 g/day | Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp. | | | | |
| Antiedemic 1 g/man/day | Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp. | | | | |
| Antiencephalitic | Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp. | | | | |
| Antiendometriotic 2,000 mg/day | | | | | |
| Antifatigue 500-1,000 mg | | | | | |
| Antifibrotic 1,000-2,000 mg | | | | | |
| Antigallstone 1,000-3,000 mg/day | | | | | |
| Antigastritic | | | | | |
| Antigingivitic | | | | | |
| Antiglaucomic 2 g/day | Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp. | | | | |
| Antihangover 1,000 mg | | | | | |

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|--|--|
| Antihemorrhagic 1 g/man/day | Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp. |
| Antihepatitic 2-6 g/man/day | Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp. |
| Antihepatotoxic | Economic & Medicinal Plant Research, 6: 189. |
| Antiherpetic 1-5 g/day | |
| Antihistaminic 2 g/day orl man | |
| Antihypertensive | |
| Antiinfertility 1 g/day | Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp. |
| Antiinflammatory | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antileptic 1.5 g/man/day | Martindale's 28th |
| Antilithic 1,000-3,000 mg/day | |
| Antimaculitic | |
| Antimeasles | Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp. |
| Antimenopausal 500-5,000 mg/day | |
| Antimigraine | Martindale's 29th |
| Antimutagenic | Economic & Medicinal Plant Research, 6: 235. |
| Antineuramidase | |
| Antinitrosic 1 g/man/day | Martindale's 28th |
| Antiobesity 1 g 3x/day | Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp. |
| Antiorchitic | Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp. |
| Antiosteoarthritic 1 g 2x/day | Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp. |
| Antiosteoporotic 500 mg/day | |
| Antioxidant 100 ppm | |
| Antiparkinsonian 1 g 2-3x/day | |
| Antiparotitic | Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp. |
| Antiperiodontitic 1 g 2x/day | Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp. |
| Antipneumonic | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antipodriac | Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp. |
| Antipoliomyelitic | Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp. |
| Antipyretic | Economic & Medicinal Plant Research, 6: 189. |
| Antiradicular | 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 |
| Antiretinotic | |
| Antirheumatic | |
| Antirhinitic 1,000 mg 3x/day | |
| Antiscorbutic 10 mg/man/day | Martindale's 28th |
| Antiseptic MIC=3.3-217 mg/ml | Martindale's 28th |
| Antiseptic 4-8 g/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 |
| Antishingles | Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp. |
| Antispasmodic 500-5,000 mg/day | |
| Antistress 500-1,000 mg | |
| Antisyndrome-X 1-4 g/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 |
| Antitumor (Gastric) | |
| Antitumor (Lung) | |
| Antiulcer | |
| Antiviral 1-5 g/day | |
| Apoptotic 1-10 mM | |
| Asthma-preventive 1,000 mg/day/orl | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Beta-Adrenergic Receptor Blocker | |
| Beta-Glucuronidase-Inhibitor 1.5 g/day/man | |
| Calcium-Antagonist | |
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Cardioprotective | |
| Cold-preventive 1-2 g/day | Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp. |
| Collagenic | |
| Detoxicant | |
| Diuretic 700 mg/man/orl | |
| Fistula-Preventive | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Hypocholesterolemic 300-1,000 mg/day | Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp. |
| Hypoglycemic | 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 |
| Hypotensive 1,000 mg/man/day | |
| Immunomodulator | |

| | | | | | |
|-------------------------|--|--|--|--|--|
| Immunostimulant | 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 | | | | |
| Interferonogenic | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). | | | | |
| Lithogenic | Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp. | | | | |
| Mucolytic 1 g/woman/day | Martindale's 28th | | | | |
| Pesticide | | | | | |
| Uricosuric 4 g/man/day | Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp. | | | | |
| Urinary-Acidulant | Martindale's 29th | | | | |
| Vasodilator | | | | | |
| Vulnerary | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). | | | | |

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|-----------|------|---------|---------|-------|---|
| ASH | Bark | 18559.0 | 67000.0 | -0.34 | * |
| BARBALOIN | Bark | -- | -- | | * |

| | | | | | |
|---------------------------------|--|--|--|--|--|
| Activities (6) | | | | | |
| Antibacterial | | | | | |
| Antihistaminic IC50=20-60 ug/ml | | | | | |
| Antitubercular | | | | | |
| Laxative 500 uM | | | | | |
| Pesticide | | | | | |
| Purgative ED50=15 mg/kg orl mus | | | | | |

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|---------------|------|------|------|------|---|
| BETA-CAROTENE | Bark | 13.0 | 46.0 | 2.14 | * |
|---------------|------|------|------|------|---|

Activities (53)

| | |
|------------------------------------|--|
| Allergenic | |
| Androgenic? | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| AntiPMS | |
| Antiacne | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiaging | |
| Antiarthritic | |
| Antiasthmatic | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Anticancer | Joseph, J., Nadeau, D. and Underwood, A. 2001. The Color Code. Hyperion, NY. |
| Anticarcinomic | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Anticervicaldysplasic | |
| Anticoronary 50 mg/man/2 days | |
| Antihyperkeratotic | |
| Antiichthyotic | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antileukoplakic | |
| Antilipoperoxidant IC71=50 ug/ml | |
| Antilupus 150 mg/man/day/2 mos | Martindale's 28th |
| Antimaculitic | |
| Antimastitic | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antimutagenic | Economic & Medicinal Plant Research, 6: 235. |
| Antioxidant | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiozenic | |
| Antipapillomic | |
| Antiphotophobic 30-300 mg/man/day | Martindale's 29th |
| Antipityriasic | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiporphyrhic 30-300 mg/man/day | Martindale's 28th |
| Antiproliferant | 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 | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antirheumatic | |
| Antistress | Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp. |
| Antitumor | Simon, P.W. Carrots and Other Horticultural Crops as a Source of Provitamin A Carotenes. HortScience, 25(12): 1495, 1990. |
| Antitumor (Breast) IC45=60 ug/ml | |
| Antitumor (CNS) IC43=45 ug/ml | |
| Antitumor (Colon) IC43=45 ug/ml | |
| Antitumor (Lung) IC30=60 ug/ml | |
| Antitumor (Prostate) | |
| Antitumor (Stomach) IC26=45 ug/ml | |
| Antiulcer 12 mg 3x/day/man/orl | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiulcer 15,000-25,000 IU/day | |
| Antixerophthalmic | Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp. |
| COX-1-Inhibitor IC78=50 ug/ml | |
| COX-2-Inhibitor IC82=50 ug/ml | |
| Cancer-Preventive 22 ppm | Jim Duke's personal files. |
| Chemopreventive | |
| Colorant | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Gastroprotective | |
| Immunostimulant 180 mg/man/day/orl | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Interferon-Synergist | |
| Mucogenic | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Phagocytotic | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Prooxidant 20 ug/g | |
| Thymoprotective | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Ubiquiot | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |

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|------------------|------|----|----|---|
| BICASCAROSIDE-AA | Bark | -- | -- | * |
| BICASCAROSIDE-AB | Bark | -- | -- | * |
| BICASCAROSIDE-AC | Bark | -- | -- | * |
| BICASCAROSIDE-AD | Bark | -- | -- | * |

| | | | | | |
|------------------|------|--------|---------|-------|---|
| BICASCAROSIDE-BB | Bark | -- | -- | | * |
| BICASCAROSIDE-BC | Bark | -- | -- | | * |
| BICASCAROSIDE-BD | Bark | -- | -- | | * |
| BICASCAROSIDE-CC | Bark | -- | -- | | * |
| BICASCAROSIDE-CD | Bark | -- | -- | | * |
| BICASCAROSIDE-DD | Bark | -- | -- | | * |
| CALCIUM | Bark | 4100.0 | 14800.0 | -0.37 | * |

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 | Bark | 224093.0 | 809000.0 | 0.34 | * |
| CASANTHRANOL | Bark | -- | -- | | * |

Activities (1)

| | |
|-----------|--------------------|
| Cathartic | Merck 11th Edition |
|-----------|--------------------|

| | | | | | |
|---------------|-------|----|----|--|---|
| CASCARIN | Plant | -- | -- | | * |
| CASCAROSIDE-A | Bark | -- | -- | | * |

Activities (1)

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

| | | | | | |
|---------------|------|---------|---------|-------|---|
| CASCAROSIDE-B | Bark | -- | -- | | * |
| CASCAROSIDE-C | Bark | -- | -- | | * |
| CASCAROSIDE-D | Bark | -- | -- | | * |
| CASCAROSIDE-E | Bark | -- | -- | | * |
| CASCAROSIDE-F | Bark | -- | -- | | * |
| CASCAROSIDES | Bark | 40000.0 | 65000.0 | | * |
| CASSIAMIN-C | Bark | -- | 120.0 | | * |
| CHROMIUM | Bark | 0.2 | 0.6 | -0.52 | * |

Activities (24)

| | |
|----------------------------------|--|
| Amphiglycemic? | Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp. |
| AntiAGE 200-1,000 ug | 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 |
| AntiCFS 200 ug | |
| Antiacne | |
| Antiaging 200-1,000 ug | 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 |
| Antiatherosclerotic 20 ug/day | |
| Anticorneotic | Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp. |
| Antidiabetic 200-1,000 ug | |
| Antidote (Lead) | Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp. |
| Antifatigue 200 ug | |
| Antiglycosuric 200-1,000 ug | |
| Antiobesity 200-1,000 ug | 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 200-800 ug | 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 |
| Antitriglyceride 20 ug/day | Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp. |
| Antitriglyceride 200-1,000 ug | 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 |
| Cardioprotective | |
| Energizer | |
| Hypocholesterolemic 20 ug/day | Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp. |
| Hypocholesterolemic 200-1,000 ug | 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 200-1,000 ug | 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 |
| Hypotensive 200-1,000 ug | 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 | |
| Insulinogenic | |
| Memorigenic | |

CHRYSALOIN Bark -- -- *

CHRYSOPHANIC-ACID Plant -- -- *

Activities (6)

| | |
|--------------------|---|
| Antispasmodic | |
| Calcium-Antagonist | |
| Fungicide | |
| Keratitigenic | Mitchell, J. and Rook, A.J. 1923. Botanical Dermatology: plants and plant products injurious to the skin. Vancouver: Greengrass, 1979. xiii, 787 p.: ill. |
| Oculoirritant | Mitchell, J. and Rook, A.J. 1923. Botanical Dermatology: plants and plant products injurious to the skin. Vancouver: Greengrass, 1979. xiii, 787 p.: ill. |
| Pesticide | |

CHRYSOPHANIC-ACID Bark -- -- *

Activities (6)

| | |
|--------------------|---|
| Antispasmodic | |
| Calcium-Antagonist | |
| Fungicide | |
| Keratitigenic | Mitchell, J. and Rook, A.J. 1923. Botanical Dermatology: plants and plant products injurious to the skin. Vancouver: Greengrass, 1979. xiii, 787 p.: ill. |
| Oculoirritant | Mitchell, J. and Rook, A.J. 1923. Botanical Dermatology: plants and plant products injurious to the skin. Vancouver: Greengrass, 1979. xiii, 787 p.: ill. |
| Pesticide | |

CHRYSOPHANIC-ACID Tissue Culture -- -- *

Activities (6)

| | |
|--------------------|---|
| Antispasmodic | |
| Calcium-Antagonist | |
| Fungicide | |
| Keratitigenic | Mitchell, J. and Rook, A.J. 1923. Botanical Dermatology: plants and plant products injurious to the skin. Vancouver: Greengrass, 1979. xiii, 787 p.: ill. |
| Oculoirritant | Mitchell, J. and Rook, A.J. 1923. Botanical Dermatology: plants and plant products injurious to the skin. Vancouver: Greengrass, 1979. xiii, 787 p.: ill. |
| Pesticide | |

CHRYSOPHANIC-ACID-9-ANTHRONE Plant -- -- Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.

Activities (2)

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

CHRYSOPHANIC-ACID-ANTHRONE Tissue Culture -- -- *

CHRYSOPHANIC-ACID-DIANTHRONE Tissue Culture -- -- *

CHRYSOPHANIC-ACID-DIMER Bark -- 840.0 *

CHRYSOPHANIC-ACID-PHYSCION-DIANTHRONE Tissue Culture -- -- *

CHRYSOPHANOL Bark -- -- *

Activities (10)

Antibacterial Recently became Internat. J. Crude Drug Res. 28(1,2,3,4):1990, page 155.

Antiseptic

Calcium-Antagonist 5/6 aloemodin

Candidicide Recently became Internat. J. Crude Drug Res. 28(1,2,3,4):1990, page 155.

Cathartic

Hemostat

Pesticide

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

Purgative ED50=>500 mg/kg orl mus

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

CHRYSOPHANOL-8-O-BETA-D-GLUCOSIDE Bark -- -- *

COBALT Bark 3.2 11.6 -0.19 *

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.

DEOXYBARBALOIN Bark -- -- *

EMODIN BI -- -- *

Activities (58)

AGEs-Inhibitor IC50=118 uM

Aldose-Reductase-Inhibitor IC50=15.9 uM

Allergenic Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.

AntiMRSA MIC 2-64 ug/ml

Antiaggregant

Antiangiogenic

Antibacterial

Anticytomegalovirus ED50=1.1 ug/ml

Antifeedant Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990.

Antiinflammatory 15 mg/kg

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

Antilymphomic

Antimutagenic

Antineoplastic

Antiplatelet ED50=1.1 ug/ml

Antiproliferant IC50=20-30 uM

| | |
|---|--|
| Antisarcotic | |
| Antiseptic | |
| 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. |
| Antisprout | |
| Antitumor (Breast) | |
| Antiulcer 15 mg/kg | |
| Antivaginitic | Tillotson, A. K. (with Abel, Jr., R., Tillotson, N.H., Bajracharya, V.M.B.). 2001. The One Earth Herbal Sourcebook: Everything You Need to Know about Chinese, Western, and Ayurvedic Herbal Treatments. Twin Streams, Kensington Publishing Corp. NY,NY. 596 pp |
| Antiviral ED50=1.1 ug/ml | |
| Antiviral EC50=1.1 | |
| CNS-Depressant 15 mg/kg ipr mus | |
| COX-2-Inhibitor | |
| Cathartic | Merck 11th Edition |
| Collagenase-Inhibitor IC50=40 uM | |
| Cytotoxic CD50=2.6 ug/ml | |
| Differentiator IC50=20-30 uM | |
| Estrogenic | |
| Genotoxic | |
| Gonadotropic | |
| Hypolipidemic | |
| Immunostimulant | |
| Immunosuppressant | |
| Leucocytogenic | |
| MMP-2-Inhibitor | |
| MMP-7-Inhibitor | |
| MMP-9-Inhibitor | |
| Mutagenic | |
| NO-Inhibitor IC50=60.7 uM | |
| PGE2-Inhibitor | |
| PTK-Inhibitor 10-100 uM | |
| PTK-Inhibitor IC50=19-37 uM | |
| Pesticide | |
| Prostaglandin-Synthesis-Inhibitor IC50=23 uM/ml | Mueller, S. O., Stopper, H. 1999. Characterization of the Genotoxicity of Anthraquinones in Mammalian Cells. Biochimica & Biophysica Acta, 1428: 406-414. |
| Protein-Kinase-C-Inhibitor IC50=25 uM | |
| Purgative ED50=>500 mg/kg orl mus | |
| Styptic | |
| Topoisomerase-II-Inhibitor 1 mM | Muller, S. O., Eckert, I., Lutz, W. K., Stopper, H. 1996. Genotoxicity of the Laxative Drug Components Emodin, Aloe-emodin and Danthron in Mammalian Cells: Topoisomerase II Mediated? Mutat Res, 371: 165-173. |
| Topoisomerase-II-Inhibitor IC50=7 uM/ml | Mueller, S. O., Stopper, H. 1999. Characterization of the Genotoxicity of Anthraquinones in Mammalian Cells. Biochimica & Biophysica Acta, 1428: 406-414. |
| Trichomonicide | |
| Tyrosine-Kinase-Inhibitor | |
| Vasodilator | |
| Vasorelaxant | |
| iNOS-Inhibitor | |

EMODIN Tissue Culture -- -- *

Activities (58)

| | |
|---|--|
| AGEs-Inhibitor IC50=118 uM | |
| Aldose-Reductase-Inhibitor IC50=15.9 uM | |
| Allergenic | Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp. |
| AntiMRSA MIC 2-64 ug/ml | |
| Antiaggregant | |
| Antiangiogenic | |
| Antibacterial | |
| Anticytomegalovirus ED50=1.1 ug/ml | |
| Antifeedant | Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990. |
| Antiinflammatory 15 mg/kg | |

| | |
|---|--|
| Antibacterial | |
| Anticytomegalovirus ED50=1.1 ug/ml | |
| Antifeedant | Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990. |
| Antiinflammatory 15 mg/kg | |
| Antileukemic | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Antilymphomic | |
| Antimutagenic | |
| Antineoplastic | |
| Antiplaque ED50=1.1 ug/ml | |
| Antiproliferant IC50=20- 30 uM | |
| Antisarcotic | |
| Antiseptic | |
| 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. |
| Antisprout | |
| Antitumor (Breast) | |
| Antiulcer 15 mg/kg | |
| Antivaginitic | Tillotson, A. K. (with Abel, Jr., R., Tillotson, N.H., Bajracharya, V.M.B.). 2001. The One Earth Herbal Sourcebook: Everything You Need to Know about Chinese, Western, and Ayurvedic Herbal Treatments. Twin Streams, Kensington Publishing Corp. NY,NY. 596 pp |
| Antiviral ED50=1.1 ug/ml | |
| Antiviral EC50=1.1 | |
| CNS-Depressant 15 mg/kg ipr mus | |
| COX-2-Inhibitor | |
| Cathartic | Merck 11th Edition |
| Collagenase-Inhibitor IC50=40 uM | |
| Cytotoxic CD50=2.6 ug/ml | |
| Differentiator IC50=20- 30 uM | |
| Estrogenic | |
| Genotoxic | |
| Gonadotropic | |
| Hypolipidemic | |
| Immunostimulant | |
| Immunosuppressant | |
| Leucocytogenic | |
| MMP-2-Inhibitor | |
| MMP-7-Inhibitor | |
| MMP-9-Inhibitor | |
| Mutagenic | |
| NO-Inhibitor IC50=60.7 uM | |
| PGE2-Inhibitor | |
| PTK-Inhibitor 10-100 uM | |
| PTK-Inhibitor IC50=19-37 uM | |
| Pesticide | |
| Prostaglandin-Synthesis- Inhibitor IC50=23 uM/ml | Mueller, S. O., Stopper, H. 1999. Characterization of the Genotoxicity of Anthraquinones in Mammalian Cells. Biochimica & Biophysica Acta, 1428: 406-414. |
| Protein-Kinase-C-Inhibitor IC50=25 uM | |
| Purgative ED50=>500 mg/kg orl mus | |
| Styptic | |
| Topoisomerase-II- Inhibitor 1 mM | Muller, S. O., Eckert, I., Lutz, W. K., Stopper, H. 1996. Genotoxicity of the Laxative Drug Components Emodin, Aloe-emodin and Danthron in Mammalian Cells: Topoisomerase II Mediated? Mutat Res, 371: 165-173. |
| Topoisomerase-II- Inhibitor IC50=7 uM/ml | Mueller, S. O., Stopper, H. 1999. Characterization of the Genotoxicity of Anthraquinones in Mammalian Cells. Biochimica & Biophysica Acta, 1428: 406-414. |
| Trichomonicide | |
| Tyrosine-Kinase-Inhibitor | |
| Vasodilator | |
| Vasorelaxant | |
| iNOS-Inhibitor | |

| | | | | |
|--------|-------|----|----|--|
| EMODIN | Plant | -- | -- | 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. |
|--------|-------|----|----|--|

Activities (58)

AGEs-Inhibitor IC50=118
uM

Aldose-Reductase-
Inhibitor IC50=15.9 uM

Allergenic Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.

AntiMRSA MIC 2-64 ug/ml

Antiaggregant

Antiangiogenic

Antibacterial

Anticytomegalovirus
ED50=1.1 ug/ml

Antifeedant Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990.

Antiinflammatory 15
mg/kg

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

Antilymphomic

Antimutagenic

Antineoplastic

Antiplaque ED50=1.1
ug/ml

Antiproliferant IC50=20-
30 uM

Antisarcomic

Antiseptic

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.

Antisprout

Antitumor (Breast)

Antiulcer 15 mg/kg

Antivaginitic Tillotson, A. K. (with Abel, Jr., R., Tillotson, N.H., Bajracharya, V.M.B.). 2001. The One Earth Herbal Sourcebook: Everything You Need to Know about Chinese, Western, and Ayurvedic Herbal Treatments. Twin Streams, Kensington Publishing Corp. NY,NY. 596 pp

Antiviral ED50=1.1 ug/ml

Antiviral EC50=1.1

CNS-Depressant 15
mg/kg ipr mus

COX-2-Inhibitor

Cathartic Merck 11th Edition

Collagenase-Inhibitor
IC50=40 uM

Cytotoxic CD50=2.6
ug/ml

Differentiator IC50=20-
30 uM

Estrogenic

Genotoxic

Gonadotropic

Hypolipidemic

Immunostimulant

Immunosuppressant

Leucocytogenic

MMP-2-Inhibitor

MMP-7-Inhibitor

MMP-9-Inhibitor

Mutagenic

NO-Inhibitor IC50=60.7
uM

PGE2-Inhibitor

PTK-Inhibitor 10-100 uM

PTK-Inhibitor IC50=19-37
uM

Pesticide

Prostaglandin-Synthesis-
Inhibitor IC50=23 uM/ml Mueller, S. O., Stopper, H. 1999. Characterization of the Genotoxicity of Anthraquinones in Mammalian Cells. Biochimica & Biophysica Acta, 1428: 406-414.

Protein-Kinase-C-Inhibitor
IC50=25 uM

Purgative ED50=>500
mg/kg orl mus

Styptic

Topoisomerase-II-
Inhibitor 1 mM Muller, S. O., Eckert, I., Lutz, W. K., Stopper, H. 1996. Genotoxicity of the Laxative Drug Components Emodin, Aloe-emodin and Danthron in Mammalian Cells: Topoisomerase II Mediated? Mutat Res, 371: 165-173.

Topoisomerase-II-
Inhibitor IC50=7 uM/ml Mueller, S. O., Stopper, H. 1999. Characterization of the Genotoxicity of Anthraquinones in Mammalian Cells. Biochimica & Biophysica Acta, 1428: 406-414.

Trichomonicide

Tyrosine-Kinase-Inhibitor

| | | | | | |
|---|----------------|--------|----------|------|--|
| Vasodilator Vasorelaxant iNOS-Inhibitor | | | | | |
| EMODIN-ANTHRONE | Tissue Culture | -- | -- | | * |
| EMODIN-ANTHRONE | Bark | -- | -- | | * |
| EMOSIN-OXANTHRONE | Plant | -- | -- | | Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp. |
| FAT | Bark | 8864.0 | 32000.0 | 0.95 | * |
| FIBER | Bark | -- | 310000.0 | 1.5 | Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp. |

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

| | | | | | |
|----------------|------|----|----------|------|---|
| FIBER(CRUDE) | Bark | -- | 310000.0 | 2.34 | * |
| FIBER(DIETARY) | Bark | -- | 560000.0 | 1.19 | * |
| FRANGULAEMODIN | Bark | -- | -- | | * |

Activities (1)

Calcium-Antagonist 5/6 aloeemodin

| | | | | | |
|-----------|------|----|----|--|---|
| FRANGULIN | Bark | -- | -- | | * |
|-----------|------|----|----|--|---|

Activities (1)

Cathartic Merck 11th Edition

| | | | | | |
|------|------|-----|------|------|---|
| IRON | Bark | 6.4 | 23.0 | -0.8 | * |
|------|------|-----|------|------|---|

Activities (6)

Antiakathisic

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

| | | | | | |
|---------------|-------|----|--------|-------|---|
| ISOEMODIN | Plant | -- | -- | | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| KILOCALORIES | Bark | -- | 2370.0 | -0.75 | Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp. |
| LINOLEIC-ACID | Plant | -- | -- | | * |

Activities (27)

5-Alpha-Reductase-Inhibitor

| | |
|-------------------------------|---|
| AntiMS | Economic & Medicinal Plant Research, 6: 189. |
| Antiacne | |
| Antiallopecic | |
| Antianaphylactic | Economic & Medicinal Plant Research, 6: 189. |
| Antiandrogenic | |
| Antiarteriosclerotic | |
| Antiartritic | Economic & Medicinal Plant Research, 6: 189. |
| Anticoronary | Jeffery B., Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Antieczemic | Economic & Medicinal Plant Research, 6: 189. |
| Antifibrinolytic | Economic & Medicinal Plant Research, 1: 53. |
| Antigranular | |
| Antihistaminic | Economic & Medicinal Plant Research, 6: 189. |
| Antiinflammatory IC50=31 uM | |
| Antileukotriene-D4 IC50=31 uM | |
| Antimenorrhagic | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiprostaitic | 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. |
| Carcinogenic | Science News, 146: 421. |
| Comedolytic | |
| Hepatoprotective | |
| Hypocholesterolemic | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.) |
| Immunomodulator | Economic & Medicinal Plant Research, 6: 189. |
| Insectifuge | Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990. |
| Metastatic | Science News, 146: 421. |
| Nematicide | Nigg, H.N. and Seigler, D.S., eds. 1992. Phytochemical Resources for Medicine and Agriculture. Plenum Press, New York. 445 pp. |
| Propepic | |

MAGNESIUM Bark 440.0 1590.0 -0.11 *

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 | |
| Antiartritic | 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 reserve 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 | |
| Antidysmenorrhic 100 mg 4 x/day | Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp. |
| Antidometriotic 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 | |
| Antiplatelet 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 | |

MALIC-ACID Plant -- -- *

Activities (15)

| | |
|--------------------------------|--|
| Antiatherosclerotic | |
| Antibacterial | |
| Antifibromyalgic 300 mg 3x/day | |
| Antioxidant Synergist | Merck 11th Edition |
| Antiseborrheic | |
| Antiseptic | Martindale's 29th |
| Antitubercular | |
| Antitumor | Economic & Medicinal Plant Research, 6: 235. |
| Bacteristat | |
| Bruchiphobe | Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990. |
| Hemopoietic | |
| Laxative? | Lawrence Review of Natural Products, Sep-91. |
| Mycobactericide | |
| Pesticide | |
| Sialogogue | Martindale's 29th |

MANGANESE Bark 0.4 1.4 -0.67 *

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 | |

MYRISTIC-ACID Plant -- -- *

Activities (6)

| | |
|----------------------|--|
| Antioxidant IC71=60 | |
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Cosmetic | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Hypercholesterolemic | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.) |
| Lubricant | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Nematicide | Nigg, H.N. and Seigler, D.S., eds. 1992. Phytochemical Resources for Medicine and Agriculture. Plenum Press, New York. 445 pp. |

NIACIN Bark 8.0 29.0 -0.55 *

Activities (39)

| | |
|--------------------------------------|--|
| Allergenic | Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp. |
| AntiLyme 50 mg/day | |
| AntiMeniere's | Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705. |
| AntiRaynaud's 1,500-4,000 mg/day | |
| Antiacrodynic | |
| Antiallergic 50 mg/2x/day | Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp. |
| Antialzheimeran | |
| Antiamblyopic | |
| Antianginal | |
| Anticataract | |
| Antichilblain | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Anticonvulsant 3 g/day | Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp. |
| Antidementia | |
| Antidermatitic | Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp. |
| Antidiabetic | |
| Antidysphagic | |
| Antiepileptic 3 g/day | Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp. |
| Antihangover 50 mg | |
| Antihistaminic 50 mg 2x/day | Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp. |
| Antihyperactivity 1.5-6 g/day | Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp. |
| Antiinsomnic 1 g/day | Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp. |
| Antineuralgic | |
| Antiparkinsonian 100 mg/day | Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp. |
| Antipellagric | Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp. |
| Antiscotomic | |
| Antispasmodic 100 mg 2x/day | Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp. |
| Antivertigo | |
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Cardioprotective | |
| Circulotonic | |
| Fibrinolytic | |
| Hepatoprotective | |
| Hepatotoxic | |
| Hypocholesterolemic 50-100 mg 3x/day | |
| Hypoglycemic | |
| Hypolipidemic | |
| Sedative | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Serotonergic | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Vasodilator | Martindale's 29th |

| | | | | | |
|------------|-------|-------|-------|-------|--|
| OXANTHRONE | Plant | -- | -- | | * |
| PALMIDINS | Bark | -- | -- | | 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. |
| PHOSPHORUS | Bark | 158.0 | 570.0 | -0.53 | * |

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. |

| | | | | | |
|----------|----------------|----|----|--|---|
| PHYSCION | Tissue Culture | -- | -- | | * |
|----------|----------------|----|----|--|---|

Activities (5)

| | |
|-------------------------------------|--|
| Antiseptic | |
| Calcium-Antagonist 5/6 aloeeomodine | |
| Cathartic | |
| Pesticide | |
| Purgative ED50=>500 mg/kg orl mus | |

| | | | | | |
|-----------------------------------|----------------|---------|----------|-------|--|
| PHYSCION | Bark | -- | -- | | * |
| Activities (5) | | | | | |
| Antiseptic | | | | | |
| Calcium-Antagonist 5/6 aloemodin | | | | | |
| Cathartic | | | | | |
| Pesticide | | | | | |
| Purgative ED50=>500 mg/kg orl mus | | | | | |
| PHYSCION-8-GLUCOSIDE | Plant | -- | -- | | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| PHYSCION-ANTHRONE | Bark | -- | -- | | * |
| PHYSCION-ANTHRONE | Tissue Culture | -- | -- | | * |
| POTASSIUM | Bark | 1103.0 | 3980.0 | -0.44 | * |
| Activities (14) | | | | | |
| Angiotensin-Receptor-Blocker | | | | | |
| Antiarrhythmic | | | | | |
| Antidepressant | | | | | |
| Antifatigue | | | | | |
| Antihypertensive | | | | | |
| Antispasmodic | | | | | |
| Antistroke | | | | | |
| Anxiolytic | | | | | |
| Beta-Blocker | | | | | |
| Cardioprotective 3,000-5,000 mg | | | | | |
| Cardiotoxic 18,000 mg/man/day | | | | | |
| Diuretic | | | | | |
| Hypotensive | | | | | |
| Vasodilator | | | | | |
| PROTEIN | Bark | 25207.0 | 91000.0 | 0.44 | * |
| PROTEIN | Seed | -- | 250000.0 | 0.14 | Earle, F. R., Glass, C. A., Geisinger, G. C., Wolff, I. A., Jones, Q. 1960. Search for New Industrial Oils. IV. J. Amer. Oil Chem. Soc. 37: 440-. Northern Regional Research Lab ARS USDA Peoria, IL, USA. |
| PURSHIANIN | Plant | -- | -- | | * |
| QUEBRACHOL | Plant | -- | -- | | * |
| RESIN | Plant | -- | -- | | * |
| RESINS | Bark | -- | -- | | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| RHAMNOL | Plant | -- | -- | | * |
| RHAMNUSTOXIN | Plant | -- | -- | | * |
| RIBOFLAVIN | Bark | -- | -- | -1.03 | * |

Activities (15)

| | |
|-------------------------------------|---|
| AntiLyme 50 mg/day | |
| Antiarabiflavonotic 2-10 mg/day orl | Martindale's 28th |
| Anticarpal-Tunnel 50 mg/day | Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp. |
| Anticataract 15 mg/day | Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp. |
| Anticephalagic | |
| Anticervicaldysplasic 1.6-10 mg/day | |
| Anticheilitic | |
| Antidecubic | |
| Antiglossitic | Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp. |
| Antikeratitic | |
| Antimigraine | |
| Antioxidant | |
| Antipellagic | |
| Antiphotophobic | Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp. |
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. |

SELENIUM Bark 0.3 1.1 -0.46 *

Activities (60)

| | |
|--|---|
| AP-1-Inhibitor 2-50 uM | |
| Analgesic 200 ug/day | Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp. |
| Anorexic | Cooper-Driver, G. A., Chemical substances in plants toxic to animals, pp. 213-47 in Rechcigl, M., Jr., ed. CRC Handbook of Naturally Occurring Food Toxicants, CRC Press, Boca Raton, 1983, 339 pp. |
| AntiHIV | |
| AntiNF-kB | |
| Antiacne 200 ug/day | Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp. |
| Antiaggregant | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiangiogenic 2 uM | |
| Antiangiogenic 230 ug/kg orl rat | |
| Antiarthritic | |
| Antiasthmatic | |
| Antiatherosclerotic | |
| Anticataract 400 ug/day | |
| Anticirrhotic | Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp. |
| Anticlimacteric 200 ug/day | |
| Anticoronary 200 ug/day | |
| Antidandruff | Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp. |
| Antidepressant 200 ug/day | |
| Antidote (Mercury) | Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp. |
| Antifibrotic 400 ug | |
| Antigout 200 ug | |
| Antikeshan | Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp. |
| Antileukemic 1.6 mg/kg ipr mus | |
| Antileukotriene | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antimaculitic | |
| Antimelanomic 480 ug/kg | |
| Antimenopausal 200 ug/day | |
| Antimetastatic 480 ug/kg | |
| Antimyalgic 200 ug/day | Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp. |
| Antiosteoarthritic | |
| Antioxidant 100-200 (-400) ug/man/day | |
| Antiparkinsonian 200-400 ug/day | |
| Antiproliferant 2 uM | |
| Antiradicular 100-200 (-400) ug/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 |
| Antirheumatic | |
| Antisyndrome-X 100-200 (-400) ug/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 |
| Antitumor 100-200 (-400) ug/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 |
| Antitumor (Breast) 333.6 ug/day | |
| Antitumor (Breast) 0.8 mg/kg scu mus | |
| Antitumor (Breast) 150 ug/kg diet rat | |

| | | | | | |
|---|--|--|--|--|--|
| Antitumor (Breast) 230 ug/kg orl rat | | | | | |
| Antitumor (Lung) 240 ug/kg diet | | | | | |
| Antitumor (Prostate) | | | | | |
| Antitumor (brain) 38-150 ug/kg | | | | | |
| Antiulcerogenic | Rafatullah, S., Tariq, M., Al-Yahya, M.A., Mossa, J.S., and Ageel, A.M. 1989. Evaluation of Turmeric (<i>Curcuma longa</i>) for Gastric and Duodenal Antiulcer Activity in Rats. <i>J. of Ethnopharmacology</i> , 29: 25-34, 1990. | | | | |
| Anxiolytic | | | | | |
| Apoptotic | | | | | |
| Cancer-Preventive | Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp. | | | | |
| Cardioprotective 200 ug/day | | | | | |
| Depressant | Cooper-Driver, G. A., <i>Chemical substances in plants toxic to animals</i> , pp. 213-47 in Rechcigl, M., Jr., ed. <i>CRC Handbook of Naturally Occurring Food Toxicants</i> , CRC Press, Boca Raton, 1983, 339 pp. | | | | |
| Fungicide | Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp. | | | | |
| Immunomodulator | | | | | |
| Immunostimulant 100-200 (-400) ug/man/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 | | | | |
| NF-kB-Inhibitor | | | | | |
| Ornithine-Decarboxylase-Inhibitor | | | | | |
| Pesticide | | | | | |
| Polyamine-Synthesis-Inhibitor | | | | | |
| Prostaglandin-Sparer | Fujita, T., Nakatani, E., Funaishi, N., Sakuma, S., Fujimoto, Y. Potent inhibition of prostaglandin inactivation in rabbit gastric antral mucosal slices by selenium ions in-vitro. <i>J. Pharm. Pharmacol.</i> 42: 655-657, 1990. | | | | |
| Protein-Kinase-C-Inhibitor IC50=2-50 uM | | | | | |
| VEGF-Inhibitor | | | | | |

SILICON Bark -- -- *

Activities (4)

| | |
|----------------------|--|
| Antiarteriosclerotic | Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp. |
| Antionychotic | |
| Antiosteoporotic | |
| Cardioprotective | |

SODIUM Bark 26.0 93.0 -0.41 *

Activities (1)

| | |
|--------------|--|
| Hypertensive | Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp. |
|--------------|--|

SUGARS Bark 13850.0 50000.0 -0.58 *

SYRINGIC-ACID Plant -- -- Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. *Herbal Medicine - A Guide for Health-care Professionals*. The Pharmaceutical Press, London. 296pp.

Activities (6)

| | |
|--------------------------------------|--|
| Allelopathic | |
| Antioxidant IC39=30 ppm | |
| Antioxidant 1/3 BHA | |
| Antiperoxidant IC10-70=100-200 ug/ml | |
| Antiradicular EC50=5.5-8 ug/ml | |
| Ubiquit | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp. |

SYRINGIN-ACID Plant -- -- *

TANNIC-ACID Plant -- -- *

Activities (41)

| | |
|---|---|
| Aldose-Reductase-Inhibitor IC50=1.8 ug/ml | Sawada, H., Hamatake, M., Hara, A., Nakagawa, M., Nakayama, T. 1989. Inhibition of Human Placenta Aldose Reductase by Tannic Acid. Chem Pharm Bull, 37(6): 1662-1664. |
| Allergenic | |
| AntiHIV IC90=200 ug/ml | Tan, G.T., Pezzuto, J.M., Kinghorn,* A.D., Hughes, S.H. Evaluation Of Natural Products As Inhibitors Of Human Immunodeficiency Virus Type 1 (HIV-1) Reverse Transcriptase. Journal of Natural Products, 54(1): 143-154, 1991. |
| Antianacarditic (Rhus) | |
| Antibacterial | |
| Anticariogenic | |
| Anticolitic | |
| Antidecubitic | |
| Antidermatotic | |
| Antidiarrheic | |
| Antidote For Heavy Metals | Merck 11th Edition |
| Antidysenteric | Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp. |
| Antiencephalitic | Vlietinck, A.J. and Dommissie, R.A. eds. 1985. Advances in Medicinal Plant Research. Wiss. Verlag. Stuttgart. |
| Antienteric | Vlietinck, A.J. and Dommissie, R.A. eds. 1985. Advances in Medicinal Plant Research. Wiss. Verlag. Stuttgart. |
| Antifeedant 2-4% diet | |
| Antigargantitic | |
| Antigingivitic | |
| Antihemorrhoidal | Martindale's 29th |
| Antiherpetic | |
| Antimutagenic | Economic & Medicinal Plant Research, 6: 235. |
| Antinitrosaminic | |
| Antiobesity (Antinutrient) | Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp. |
| Antiophidic | |
| Antioxidant IC56=30 ppm | |
| Antipharyngitic | |
| Antipolio | Vlietinck, A.J. and Dommissie, R.A. eds. 1985. Advances in Medicinal Plant Research. Wiss. Verlag. Stuttgart. |
| Antirhinitic | |
| 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. |
| Antistomatitic | |
| Antitonsillitic | |
| Antiulcer | Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp. |
| Antiviral | Antiviral Research, 14: 323. |
| 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. |
| Cytotoxic 15 ug | |
| Detoxicant | Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp. |
| Emetic | Martindale's 29th |
| FLavor FEMA 1-1,000 | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |
| Hemostat | Merck 11th Edition |
| Hepatotoxic | Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp. |
| Immunostimulant | McKenna, D. J., Hughes, K., and Jones, K. 2000. Green Tea Monograph. Alternative Therapies, 6(3): 61-82. |
| Pesticide | |

TANNIN

Plant

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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 | |

| | | | | | |
|----------------|------|----|----|-------|---|
| TANNINS | Bark | -- | -- | | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| THIAMIN | Bark | -- | -- | -0.66 | Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp. |

Activities (31)

| | |
|----------------------------------|--|
| Analgesic 1-4 g/day | Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp. |
| AntiLyme 50 mg | |
| Antialcoholic 50-100 mg/day | |
| Antialzheimeran 100-3,000 mg/day | Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp. |
| Antianorectic | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Antibackache 1-4 g/day | Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp. |
| Antiberiberi | |
| Anticanker | |
| Anticardiospasmic | |
| Anticataract | |
| Anticolitic | |
| Antidecubitic | |
| Antideliriant | |
| Antidementia | |
| Antidyspeptic | |
| Antiencephalopathic | Martindale's 29th |
| Antifatigue | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Antigastritic | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Antihangover 50 mg | |
| Antiheartburn | |
| Antiherpetic | |
| Antimigraine | |
| Antimyocarditic | |
| Antineuralgic 1-4 g/day | Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp. |
| Antineurasthenic | |
| Antineuritic | |
| Antineuropathic 50 mg | Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp. |
| Antipoliomyelitic | |
| Insectifuge 75-150 mg/man/day | Martindale's 28th |
| Neuroprotective | |
| Pesticide | |

| | | | | | |
|----------|------|-----|-----|-------|---|
| THIAMINE | Bark | -- | -- | -0.75 | * |
| TIN | Bark | 1.4 | 5.1 | -0.96 | * |

Activities (4)

| | |
|---------------|-------------------|
| Antiacne | |
| Antibacterial | |
| Pesticide | |
| Taenicide | Martindale's 28th |

| | | | | | |
|-------|------|----|----------|------|---|
| WATER | Bark | -- | 723000.0 | 0.24 | * |
| ZINC | Bark | -- | -- | | * |

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. |

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| 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 | |
| Antiplateque | 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) | |
| Erogenic | |
| 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
Vulnerary

Martindale's 29th
Martindale's 28th