

# List of All Chemicals

## **P** Viscum album (Viscaceae)

### Common name(s)

European Mistletoe

\*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<br><input type="button" value="All"/> | Low<br>PPM | High<br>PPM | StdDev | *Reference |
|--|--|------------|-------------|--------|------------|
| 4,5-DIHYDROXY-3,7-DIMETHOXYFLAVONE                           | Twig                                       | --         | --          |        | *          |
| <b>Activities (3)</b>  |  |            |             |        |            |
| Antirhinoviral   |  |            |             |        |            |
| Antiviral  |  |            |             |        |            |
| Pesticide  |  |            |             |        |            |
| ACETYL-CHOLINE   | Plant                                      | --         | --          |        | *          |
| <b>Activities (19)</b>                                       |  |            |             |        |            |
| Allergenic   |  |            |             |        |            |
| Antiamblyopic  |  |            |             |        |            |
| Antidiuretic   |  |            |             |        |            |
| Antiileus  |  |            |             |        |            |
| Antitachycardic  |  |            |             |        |            |
| Cardiodepressant   |  |            |             |        |            |
| Cerebrostimulant   |  |            |             |        |            |
| Histaminic   |  |            |             |        |            |
| Hypotensive  |  |            |             |        |            |
| Miotic   |  |            |             |        |            |
| Myocontractant 2 uM  |  |            |             |        |            |
| Myopic   |  |            |             |        |            |
| Myotonic   |  |            |             |        |            |
| Neurotransmitter   |  |            |             |        |            |
| Parasympathomimetic 0.002 mg/kg ivn rat                      |  |            |             |        |            |
| Peristaltic  |  |            |             |        |            |
| Sialogogue   |  |            |             |        |            |
| Spasmogenic Antidote=600 ug atropine sulfate ivn ims scu hmn |  |            |             |        |            |
| Vasodilator  |  |            |             |        |            |
| ALPHA-CAROTENE   | Leaf                                       | --         | --          |        | *          |
| <b>Activities (7)</b>  |  |            |             |        |            |
| Anticancer   |  |            |             |        |            |
| Anticancer (Liver)   |  |            |             |        |            |
| Anticancer (Lung)  |  |            |             |        |            |
| Anticancer (Skin)  |  |            |             |        |            |
| Antiproliferant 10 x beta-carotene                           |  |            |             |        |            |
| Colorant   |  |            |             |        |            |
| Previtamin-A   |  |            |             |        |            |
| ALUMINUM   | Leaf                                       | --         | 283.0       | -0.48  | *          |

**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       |  |

ARGININE Juice -- -- \*

**Activities (14)**

|                         |  |
|-------------------------|--|
| Antidiabetic?           | Wichtl, M. 1984. Teedrogen. Ein Handbuch für Apotheker und Ärzte. Wissenschaftliche Verlagsgesellschaft. mbH Stuttgart. 393 pp.                        |
| Antiencephalopathic     | Martindale's 29th  |
| Antihepatic             | Martindale's 29th  |
| Antihypertensive        |  |
| Antiimpotence           |  |
| Antiinfertility 4 g/day | Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.   |
| Antioxidant?            |  |
| Aphrodisiac 3 g/day     |  |
| Diuretic                |  |
| Hypoammonemic           | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| NO-Genic                |  |
| Pituitary-Stimulant     |  |
| Spermigenic 4 g/day     | Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.   |
| Vasodilator             |  |

ASCORBIC-ACID Fruit -- 7500.0 0.18 \*

**Activities (112)**

|  |  |
|--|--|
| Acidulant FEMA 6,000                     | Aloe Research Council - Duke writeup of non-peer reviewed 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 reverse 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 reverse 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            |  |
| Antiaggregant                            | 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 |
| 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 reverse 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                   |  |
| Antidecubic 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 reverse 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                      |  |
| 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              |  |
| Antimaaculitic                             |  |
| 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).   |

|              |       |    |         |       |   |
|--------------|-------|----|---------|-------|---|
| ASH          | Leaf  | -- | 54000.0 | -1.14 | * |
| ASORBIC-ACID | Leaf  | -- | 750.0   |       | * |
| ASPARAGINE   | Juice | -- | --      |       | * |

#### Activities (2)

|              |   |
|--------------|---|
| Antisickling | Ekeke, G.I. and Shode, F.O. 1988. Phenylalanine is the Predominant Antisickling Agent in Cajanus cajan Seed Extract. Planta Medica 56(1): 41, 1990. |
| Diuretic     | HerbalGram No. 17.  |

|            |      |    |    |  |   |
|------------|------|----|----|--|---|
| AVICULARIN | Twig | -- | -- |  | * |
|------------|------|----|----|--|---|

#### Activities (7)

|  |   |
|--|---|
| Aldose-Reductase-Inhibitor IC32=1 uM         | Shimizu, M., Ito, T., Terashima, S., Hayashi, T., Arisawa, M., Morita, N., Kurokawa, S., Ito, K., and Hashimoto, Y. 1984. Inhibition of Lens Aldose Reductase by Flavonoids. Phytochemistry, 23: 1885-1888. |
| Aldose-Reductase-Inhibitor IC84=10 uM        | Shimizu, M., Ito, T., Terashima, S., Hayashi, T., Arisawa, M., Morita, N., Kurokawa, S., Ito, K., and Hashimoto, Y. 1984. Inhibition of Lens Aldose Reductase by Flavonoids. Phytochemistry, 23: 1885-1888. |
| Antibiotic                                   | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses   |
| Cyclooxygenase-Activator 100 uM              | Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin.  |
| Diuretic                                     | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses   |
| Pesticide                                    |   |
| Tissue-Thromboplastin-Inhibitor IC50=54.8 uM |   |

|             |                           |    |    |  |   |
|-------------|---------------------------|----|----|--|---|
| BETA-AMYRIN | Resin,<br>Exudate,<br>Sap | -- | -- |  | * |
|-------------|---------------------------|----|----|--|---|

#### Activities (9)

|                                  |
|----------------------------------|
| Analgesic                        |
| Antiedemic IC27=40 mg/kg ipr rat |
| Antiinflammatory                 |
| Antinociceptive                  |
| Antiulcer                        |
| Gastroprotective                 |
| Hepatoprotective                 |
| Larvicide                        |
| Mosquitocide                     |

|               |      |    |    |  |   |
|---------------|------|----|----|--|---|
| BETA-CAROTENE | Leaf | -- | -- |  | * |
|---------------|------|----|----|--|---|

**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. |

**BETULIN**

Shoot

--

--

Jim Duke's personal files.

**Activities (13)**

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

BETULINIC-ACID      Shoot      --      5.4      -0.28      Jim Duke's personal files.

**Activities (22)**

|   |   |
|---|---|
| Anthelmintic                                  |   |
| AntiHIV EC50=2.0 ug/ml                        | Kashiwada, Y., et. al. 1998. <i>Anti-AIDS Agents</i> . 30. Anti-HIV Activity of Oleanolic Acid, Pomolic Acid, and Structurally Related Triterpenoids. <i>J. Nat. Prod.</i> , 61 (9): 1090-1095.                                   |
| AntiHIV IC50=6.5 ug/ml                        |   |
| AntiHIV 14.8 uM                               |   |
| Antibacterial                                 |   |
| Anticancer                                    | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants.</i> Taylor & Frost, London. 791 pp.   |
| Anticarcinomic                                | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants.</i> Taylor & Frost, London. 791 pp.   |
| Antiedemic                                    |   |
| Antiinflammatory                              | Recio, M., et al. 1994. Investigations on the Steroidal Anti-Inflammatory Activity of Triterpenoids from <i>Diospyros leucomelas</i> *. <i>Planta Medica</i> , 61: 9.   |
| Antileukemic                                  |   |
| Antimalarial IC50=19-26 ug/ml                 |   |
| Antimelanomic                                 | New York Times, 3/28/95.  |
| Antinociceptive                               |   |
| Antiplasmodial IC50=19-26 ug/ml               |   |
| Antitumor                                     | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants.</i> Taylor & Frost, London. 791 pp.   |
| Antiviral 14.8 uM                             |   |
| Apoptotic                                     |   |
| Cytotoxic 50-100 ppm                          | Biosyn. Prod. <i>Cancer Chemotherapy</i> (Petit et al)  |
| Cytotoxic 16.4 uM                             |   |
| Phospholipase-A2-Inhibitor                    |   |
| Prostaglandin-Synthesis-Inhibitor 200 ug/ml   | Dunstan, C. A., Liu, B., Welch, C. J., Perera, P., Bohlin, L. 1998. Alphitol, a Phenolic Substance from <i>Alphitonia zizyphoides</i> which Inhibits Prostaglandin Biosynthesis in vitro. <i>Phytochemistry</i> , 48(3): 495-497. |
| Prostaglandin-Synthesis-Inhibitor IC50=101 uM | Huang, C., Tunon, H., Bohlin, L. 1995. Anti-Inflammatory Compounds Isolated from <i>Menyanthes trifoliata</i> L. <i>Yao Hsueh Hsueh Pao</i> , 30(8): 621-626.   |

BETULINIC-ACID      Leaf      --      --      Jim Duke's personal files.

**Activities (22)**

|   |   |
|---|---|
| Anthelmintic                                  |   |
| AntiHIV EC50=2.0 ug/ml                        | Kashiwada, Y., et. al. 1998. Anti-AIDS Agents. 30. Anti-HIV Activity of Oleanolic Acid, Pomolic Acid, and Structurally Related Triterpenoids. <i>J. Nat. Prod.</i> , 61 (9): 1090-1095.   |
| AntiHIV IC50=6.5 ug/ml                        |   |
| AntiHIV 14.8 uM                               |   |
| Antibacterial                                 |   |
| Anticancer                                    | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants.</i> Taylor & Frost, London. 791 pp.   |
| Anticarcinomic                                | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants.</i> Taylor & Frost, London. 791 pp.   |
| Antiedemic                                    |   |
| Antiinflammatory                              | Recio, M., et al. 1994. Investigations on the Steroidal Anti-Inflammatory Activity of Triterpenoids from <i>Diospyros leucomelas</i> *. <i>Planta Medica</i> , 61: 9.   |
| Antileukemic                                  |   |
| Antimalarial IC50=19-26 ug/ml                 |   |
| Antimelanomic                                 | New York Times, 3/28/95.  |
| Antinociceptive                               |   |
| Antiplasmodial IC50=19-26 ug/ml               |   |
| Antitumor                                     | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants.</i> Taylor & Frost, London. 791 pp.   |
| Antiviral 14.8 uM                             |   |
| Apoptotic                                     |   |
| Cytotoxic 50-100 ppm                          | Biosyn. Prod. Cancer Chemotherapy (Petit et al)   |
| Cytotoxic 16.4 uM                             |   |
| Phospholipase-A2-Inhibitor                    |   |
| Prostaglandin-Synthesis-Inhibitor 200 ug/ml   | Dunstan, C. A., Liu, B., Welch, C. J., Perera, P., Bohlin, L. 1998. Alphitol, a Phenolic Substance from <i>Alphitonia zizyphoides</i> which Inhibits Prostaglandin Biosynthesis in vitro. <i>Phytochemistry</i> , 48(3): 495-497. |
| Prostaglandin-Synthesis-Inhibitor IC50=101 uM | Huang, C., Tunon, H., Bohlin, L. 1995. Anti-Inflammatory Compounds Isolated from <i>Menyanthes trifoliata</i> L. <i>Yao Hsueh Hsueh Pao</i> , 30(8): 621-626.   |

CAFFEIC-ACID                      Plant                      --                      --                      \*

**Activities (102)**

|  |   |
|--|---|
| Aldose-Reductase-Inhibitor 4 ug/ml (weak activity) | Ichikawa, K., et al. 1991. Isolation and Structure Determination of Aldose Reductase Inhibitors from Traditional Thai Medicine, and Syntheses of Their Derivatives. <i>Sankyo Kenkyusho Nempo</i> , 43: 99-110.                       |
| Allergenic   |   |
| Analgesic  |   |
| AntiHIV EC50=200 ug/ml                             |   |
| AntiLegionella                                     |   |
| Antiadenoviral                                     | Economic & Medicinal Plant Research, 5: 207.  |
| Antiaaggregant                                     | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants.</i> Taylor & Frost, London. 791 pp.   |
| Antiaging  |   |
| Antiatherogenic                                    |   |
| Antibacterial                                      |   |
| Anticancer   |   |
| Anticarcinogenic                                   | Economic & Medicinal Plant Research, 6: 189.  |
| Antidepressant                                     |   |
| Antiedemic   | Economic & Medicinal Plant Research, 6: 189.  |
| Antielastase IC50=93 um/l                          |   |
| Antielastase IC50=86 ug/ml (475 uM)                |   |
| Antiescherichic                                    |   |
| Antiflu  | Economic & Medicinal Plant Research, 5: 207.  |
| Antigonadotropic                                   | Jim Duke's personal files.  |
| Antihemolytic 25 uM                                | Ohnishi, M., Morishita, H., Iwahashi, H., Toda, S., Shirataki, Y., Kimura, M., and Kido, R. 1993. Inhibitory Effects of Chlorogenic Acids on Linoleic Acid Peroxidation and Haemolysis. <i>Phytochemistry</i> . 36(3): 579-583. 1994. |
| Antihepatoadenomic 200 ppm diet orl<br>mus         |   |
| Antihepatotoxic                                    |   |
| Antiherpetic 50 ug/ml                              |   |
| Antiherpetic EC50=>50 ug/ml                        |   |
| Antihistaminic                                     |   |
| Antihypercholesterolemic                           | Economic & Medicinal Plant Research, 6: 189.  |
| Antihyperthyroid                                   |   |
| Antiinflammatory                                   |   |
| Antileukemic                                       | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46.  |
| Antileukotriene                                    |   |
| Antimelanogenic                                    |   |
| Antimutagenic                                      | Ki Soon Rhee. Oilseed Food Ingredients Used To Minimize Oxidative Flavor Deterioration in Meat Products. Phenolic Compounds in Food and Their Effects on Health, Ch.18.   |

|   |   |
|---|---|
| Antinitrosaminic  | Ki Soon Rhee. Oilseed Food Ingredients Used To Minimize Oxidative Flavor Deterioration in Meat Products. Phenolic Compounds in Food and Their Effects on Health, Ch.18.   |
| Antiaphidic   |   |
| Antioxidant 50 uM   |   |
| Antioxidant IC57=30 ppm   |   |
| Antioxidant 1/3 quercetin   |   |
| Antioxidant 30 mM   |   |
| Antioxidant 1.3 x Vit. E  |   |
| Antioxidant 1/2 BHA   |   |
| Antiperoxidant IC50=44 uM   | Planta Medica, 57: A54, 1991.   |
| Antiperoxidant IC35=200 ug/ml                                       |   |
| Antiperoxidant IC85=100 ug/ml                                       |   |
| Antiproliferant   | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. Am J Chin Med, 31(1):37-46.  |
| Antiprostaglandin   |   |
| Antiradicular 10 uM   | Ohnishi, M., Morishita, H., Iwahashi, H., Toda, S., Shirataki, Y., Kimura, M., and Kido, R. 1993. Inhibitory Effects of Chlorogenic Acids on Linoleic Acid Peroxidation and Haemolysis. Phytochemistry. 36(3): 579-583. 1994. |
| Antiradicular 1/3 quercetin   |   |
| Antiradicular 30 mM   |   |
| Antiradicular IC50=32-35 uM   |   |
| Antiseptic  |   |
| Antispasmodic EC50=3.4-15 uM  | Phytotherapy Research, 4: 73.   |
| Antistaphylococcic  |   |
| Antistomatitic  | Economic & Medicinal Plant Research, 5: 207.  |
| Antisunburn   |   |
| Antithiamin   | Phenolic Compounds in Food and Their Effects on Health, 69.   |
| Antithyroid   | Jim Duke's personal files.  |
| Antitumor 200 ppm diet orl mus                                      |   |
| Antitumor (Skin)  |   |
| Antitumor-Promoter IC42=10 uM                                       | Cancer Research, 48: 5941.  |
| Antiulcerogenic   |   |
| Antivaccinia  | Economic & Medicinal Plant Research, 5: 207.  |
| Antiviral IC50=62.5 ug/ml   |   |
| Anxiolytic  |   |
| CNS-Active  | Wichtl, M. 1984. Teedrogen. Ein Handbuch fur Apotheker und Arzte. Wissenschaftliche Verlagsgesellschaft. mbH Stuttgart. 393 pp.   |
| COX-2-Inhibitor IC32=100 uM   |   |
| Calcium-Antagonist IC50=1.2 uM rbt                                  |   |
| Cancer-Preventive   | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.   |
| Carcinogenic 2% (diet)  |   |
| Chemopreventive   |   |
| Cholagogue  | Wichtl, M. 1984. Teedrogen. Ein Handbuch fur Apotheker und Arzte. Wissenschaftliche Verlagsgesellschaft. mbH Stuttgart. 393 pp.   |
| Choleretic  | 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.                              |
| Clastogenic   | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.  |
| Co-carcinogenic   |   |
| Collagen-Sparing  |   |
| Cytoprotective  | Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.  |
| Cytotoxic TC50=200 ug/ml  |   |
| DNA-Active  | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.  |
| DNA-Protective  |   |
| Diuretic  | Wichtl, M. 1984. Teedrogen. Ein Handbuch fur Apotheker und Arzte. Wissenschaftliche Verlagsgesellschaft. mbH Stuttgart. 393 pp.   |
| Fungicide MIC=0.4 mg/ml   |   |
| Hepatocarcinogenic 400 ppm diet orl mus (in the absence of alcohol) |   |
| Hepatoprotective  | Advance in Chinese Medicinal Materials Research. 1985. Eds. H. M. Chang, H. W. Yeung, W. -W. Tso and A. Koo. World Scientific Publishing Co., Philadelphia Pa., page 210.   |
| Hepatotropic  |   |
| Histamine-Inhibitor   |   |
| Immunostimulant   |   |
| Insectifuge   | Tunon, H., Thorsell, W., and Bohlin, L. 1993. Mosquito Repelling Activity of Compounds Occurring in Achillea millefolium L. (Asteraceae). Economic Botany 48(2): 111-120, 1994.   |
| Leukotriene-Inhibitor   |   |
| Lipoxygenase-Inhibitor IC27=5 mM                                    | Oszmianski, J. and Lee, C.Y. 1990. Inhibitory Effect of Phenolics on Carotene Bleaching in Vegetables. J. Agric. Food Chem. 38: 688-690.  |
| Lipoxygenase-Inhibitor IC50=62-148 uM                               |   |
| Lyase-Inhibitor IC50=94-164 uM                                      |   |
| Metal-Chelator  | McEvily, A.J., Iyengar, R., and Gross, A.T. Inhibition of Polyphenol Oxidase by Phenolic Compounds. Phenolic Compounds in Food and Their Effects on Health, Ch.25.  |



|  |  |
|--|--|
| Ornithine-Decarboxylase-Inhibitor        | Hagerman, A.E. Tannin-Protein Interactions. Phenolic Compounds in Food and Their Effects on Health, Ch.19.                               |
| Pesticide                                |  |
| Prooxidant                               |  |
| Prostaglandigenic                        |  |
| Sedative 500 mg                          |  |
| Sunscreen IC50=2.5 mg/l                  | Lazarova*, G., Kostova, I., Neychev, H. 1992. Photodynamic damage prevention by some hydroxycoumarins. Fitoterapia 64(2): 134-136, 1993. |
| Sunscreen IC91=5 mg/l                    | Lazarova*, G., Kostova, I., Neychev, H. 1992. Photodynamic damage prevention by some hydroxycoumarins. Fitoterapia 64(2): 134-136, 1993. |
| Sunscreen IC98=25 mg/l                   | Lazarova*, G., Kostova, I., Neychev, H. 1992. Photodynamic damage prevention by some hydroxycoumarins. Fitoterapia 64(2): 134-136, 1993. |
| Tumorigenic                              | Jim Duke's personal files.   |
| Vulnerary                                |  |
| Xanthine-Oxidase-Inhibitor IC50=39.21 uM | Mills, Simon and Bone, Kerry. 2000. Phytotherapy. Churchill Livinston, Edinburgh.  |

CALCIUM Leaf -- 8910.0 -0.65 \*

**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        |  |
| Antitictic                         | 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                        |  |

CERYL-ALCOHOL Resin, Exudate, Sap -- -- \*

CHROMIUM Leaf -- 19.0 0.98 \*

| 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                      |  |  |  |  |  |

COBALT                      Leaf                      --                      92.0                      0.25                      \*

| 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. |

CYSTEIC-ACID                      Juice                      --                      --                      \*                      \*

ELEUTHEROSIDE-E                      Plant                      --                      --                      \*                      \*

| Activities (2) |  |  |  |  |  |
|----------------|--|--|--|--|--|
| Androgenic     |  |  |  |  |  |
| Antistress     |  |  |  |  |  |

EPSILON-N-METHYL-LYSINE                      Plant                      --                      --                      \*                      \*

FAT                      Leaf                      --                      23000.0                      -0.67                      \*                      \*

FLAVORADORININE-B                      Plant                      --                      --                      \*                      \*

FLAVOYADORININE-A                      Plant                      --                      --                      \*                      \*

GABA                      Plant                      --                      --                      \*                      \*

**Activities (22)**

|   |  |
|---|--|
| Analeptic                               |  |
| Anticephalagic                          |  |
| Anticerebrotic                          | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.                         |
| Antichoreic 1-32 g/man/day              | Martindale's 29th  |
| Anticonvulsant 4,120 mg/kg ipr mus      | Borchard, R. E., Barnes, C. D., and Eltherton, L. G. 1991. Drug Dosage in Laboratory Animals: A Handbook. (3rd Ed.) The Telford Press, Inc., P. O. Box 287, Caldwell NJ 07006. |
| Antihypertensive 1,000-4,000 mg/man/day |  |
| Antiinsomniac                           |  |
| Antilethargic                           |  |
| Antistress                              |  |
| Antitinnitic                            |  |
| Anxiolytic                              |  |
| CNS-Inhibitor 2,500 mg/kg scu mus       | Borchard, R. E., Barnes, C. D., and Eltherton, L. G. 1991. Drug Dosage in Laboratory Animals: A Handbook. (3rd Ed.) The Telford Press, Inc., P. O. Box 287, Caldwell NJ 07006. |
| CNS-Inhibitor 0.1 mg/kg ivn cat         | Borchard, R. E., Barnes, C. D., and Eltherton, L. G. 1991. Drug Dosage in Laboratory Animals: A Handbook. (3rd Ed.) The Telford Press, Inc., P. O. Box 287, Caldwell NJ 07006. |
| CNS-Inhibitor 100 mg/kg ivn dog         | Borchard, R. E., Barnes, C. D., and Eltherton, L. G. 1991. Drug Dosage in Laboratory Animals: A Handbook. (3rd Ed.) The Telford Press, Inc., P. O. Box 287, Caldwell NJ 07006. |
| Cardiovascular 208 ivn dog              | Borchard, R. E., Barnes, C. D., and Eltherton, L. G. 1991. Drug Dosage in Laboratory Animals: A Handbook. (3rd Ed.) The Telford Press, Inc., P. O. Box 287, Caldwell NJ 07006. |
| Diuretic 1,500-4,000 mg/man/day         |  |
| Hypotensive 1,000-4,000 mg/day          |  |
| Neuroinhibitor                          |  |
| Neurotoxic (to birds)                   | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.                         |
| Neurotransmitter                        |  |
| Sedative                                |  |
| Tranquilizer                            | Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.   |

GENTISIC-ACID                      Shoot            --            --    \*

**Activities (8)**

|                     |  |
|---------------------|--|
| Analgesic           | Merck 11th Edition   |
| Antibacterial       | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Antifeedant         |  |
| Antiinflammatory    | Merck 11th Edition   |
| Antioxidant 1/3 BHA |  |
| Antirheumatic       | Grenand, P., Moretti, C., and Jacquemin, H. 1987. Pharmacopees Traditionnelles en Guyane. l'ORSTROM, Paris. 569 pp.                                    |
| Antiviral           | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Pesticide           |  |

GLUCOSE                                      Plant            --            --    \*

**Activities (7)**

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

GUAIACYL-SYRINGYL-LIGNIN                      Plant            --            --    \*

HISTAMINE                                      Plant            --            --    \*

**Activities (18)**

|                                   |  |
|-----------------------------------|--|
| Allergenic                        |  |
| AntiMeniere's                     | Martindale's 28th  |
| Antichilblain                     | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.                         |
| Antimigraine                      | Martindale's 28th  |
| Bronchoconstrictor                | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.                         |
| Bronchostimulant                  | Martindale's 28th  |
| Cardiovascular 0.15 mg/kg ivn rbt | Borchard, R. E., Barnes, C. D., and Eltherton, L. G. 1991. Drug Dosage in Laboratory Animals: A Handbook. (3rd Ed.) The Telford Press, Inc., P. O. Box 287, Caldwell NJ 07006. |
| Gastrostimulant                   | Martindale's 28th  |
| Histaminic Antidote:Adrenaline    | Martindale's 29th  |
| Hypotensive                       | Martindale's 28th  |
| Irritant                          | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.                         |
| Myostimulant                      | Martindale's 29th  |
| Radioprotective                   | Martindale's 28th  |
| Secretogogue                      | Martindale's 29th  |
| Spasmogenic                       |  |
| Tachycardic                       | Martindale's 29th  |
| Ulcerogenic 100 mg/kg ipr rat     |  |
| Vasodilator                       | Martindale's 29th  |

HOMOFLAVOYADORONINE-B Plant -- -- \*

HYDROXYLYSINE Juice -- -- \*

INOSITOL Fruit -- 4000.0 1.0 \*

**Activities (8)**

|                                  |  |
|----------------------------------|--|
| Antialopecic                     |  |
| Anticirrhotic                    |  |
| Antidiabetic?                    | Martindale's 29th  |
| Antineuropathic? 2 g/day         | Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.   |
| Cholesterolytic 2,000 mg/man/day |  |
| Lipotropic                       | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Sweetener                        | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Ubiquiot                         | Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.                                 |

IRON Leaf -- 460.0 0.25 \*

**Activities (6)**

|                                    |  |
|------------------------------------|--|
| Antiakathisic                      | Martindale's 29th  |
| Antianemic                         | Martindale's 29th  |
| Anticanker                         |  |
| 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                         |  |

LUPEOL Resin, Exudate, Sap -- -- \*

**Activities (21)**

|                                   |  |
|-----------------------------------|--|
| AntiEBV                           |  |
| Antiangiogenic 30-50 ug/ml        |  |
| Antiedemic                        |  |
| Antiflu                           |  |
| Antihyperglycemic                 | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.   |
| Antiinflammatory 1/3 indomethacin |  |
| Antilithic 25 mg/kg/day           |  |
| Antimalarial IC50=46.8 ug/ml      | Khalid, S.A., Farouk, A., Geary**, T.G., and Jensen, J.B. 1985. Potential Antimalarial Candidates From African Plants: An In Vitro Approach Using Plasmodium falciparum*. Journal of Ethnopharmacology, 15: 201-209, 1986. |
| Antioxalate 25 mg/kg/day          |  |
| Antioxidant 25 mg/kg/day          |  |
| Antiperoxidant 25 mg/kg/day       |  |
| Antiprostaglandin                 |  |
| Antirheumatic                     |  |
| Antitumor                         | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.   |
| Antiurethrotic                    |  |
| Antiviral                         |  |
| Cytotoxic 50-500 ppm              |  |
| FPTase-Inhibitor IC50=65 ug/ml    |  |
| Hypotensive                       | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.   |
| Pesticide                         |  |
| TOPO-2-Inhibitor IC50=10.4 uM     |  |

LUTEIN                      Leaf            --            --                                      \*

**Activities (15)**

|                                  |   |
|----------------------------------|---|
| Antiatherosclerotic              |   |
| Anticancer (Breast)              | Madhavi, D. L., Bomser, J., Smith, M., Singletary, K. 1998. Isolation of Bioactive Constituents from Vaccinium myrtillus (Bilberry) Fruits and Cell Cultures. Plant Sci., 131(1): 95-103. |
| Antimaculitic                    | Joseph, J., Nadeau, D. and Underwood, A. 2001. The Color Code. Hyperion, NY.  |
| Antinyctalopic                   | Joseph, J., Nadeau, D. and Underwood, A. 2001. The Color Code. Hyperion, NY.  |
| Antioxidant                      |   |
| Antiproliferant                  | Joseph, J., Nadeau, D. and Underwood, A. 2001. The Color Code. Hyperion, NY.  |
| Antiradicular                    |   |
| Antiretinitic Optometry          |   |
| Antitumor (Breast)               | Madhavi, D. L., Bomser, J., Smith, M., Singletary, K. 1998. Isolation of Bioactive Constituents from Vaccinium myrtillus (Bilberry) Fruits and Cell Cultures. Plant Sci., 131(1): 95-103. |
| Antitumor (Colon)                |   |
| Colorant                         | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.                                    |
| Prooxidant 5-40 ug/g             |   |
| Quinone-Reductase-Inducer 2.5 ug | Madhavi, D. L., Bomser, J., Smith, M., Singletary, K. 1998. Isolation of Bioactive Constituents from Vaccinium myrtillus (Bilberry) Fruits and Cell Cultures. Plant Sci., 131(1): 95-103. |
| Retinoprotectant Optometry       |   |
| Ubiquiot                         | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.                                    |

MAGNESIUM                      Leaf            --            3110.0            -0.39                                      \*

**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.   |
| Anti-anxiety 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/day           |  |
| Antidysmenorrheic 100 mg 4 x/day          | Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.   |
| Antiendometriotic 500 mg/day              |  |
| Antienterotic                             |  |
| Antiepileptic 450 mg/day                  |  |
| Antifatigue                               |  |
| Antifibromyalgic 200-300 mg 3x/day        |  |
| 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 |  |
| 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 reverse 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 reverse 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 reverse 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 reverse 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                               |  |

MANGANESE Leaf -- 159.0 -0.2 \*

**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   |  |

MANNITOL Plant -- -- \*

**Activities (18)**

|                  |  |
|------------------|--|
| Allergenic       | Martindale's 29th  |
| Analgesic        |  |
| Anthelmintic     | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.                             |
| AntiReye's       | Martindale's 29th  |
| Antiglaucomic    | Martindale's 28th  |
| Antiinflammatory | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.                             |
| Antimutagenic    |  |
| Antinephritic    | Martindale's 29th  |
| Antioxidant      | Jim Duke's personal files.   |
| Antiradicular    |  |
| Antispasmodic    | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.                             |
| Diuretic         | Merck 11th Edition   |
| Emetic           | Martindale's 28th  |
| Flatugenic       | Martindale's 29th  |
| Laxative         |  |
| Nephrotoxic      | Martindale's 29th  |
| Pesticide        |  |
| Sweetener        | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |

MESO-INOSITOL Fruit -- 12000.0 \*

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.                         |

OLEANOLIC-ACID Resin, Exudate, Sap -- -- \*

**Activities (64)**

|                            |   |
|----------------------------|---|
| Abortifacient              |   |
| AntiHIV IC50=21.8 ug/ml    |   |
| AntiHIV EC50=1.7 ug/ml     | Kashiwada, Y., et. al. 1998. Anti-AIDS Agents. 30. Anti-HIV Activity of Oleanolic Acid, Pomolic Acid, and Structurally Related Triterpenoids. J. Nat. Prod., 61 (9): 1090-1095. |
| AntiPGE2 IC50=24 uM        |   |
| AntiTGF-beta IC50=19-24 uM |   |
| Antiallergic               |   |
| Antiarrhythmic 40 mg/kg    |   |

|   |   |
|---|---|
| Antiatherosclerotic                     |   |
| Antibacterial MIC=625-1,250 ug/ml       |   |
| Anticarcinomic                          | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46.  |
| Anticariogenic                          | Leung, A. Y. and Foster, S. 1995. <i>Encyclopedia of Common Natural Ingredients</i> 2nd Ed. John Wiley & Sons, New York. 649 pp.  |
| Anticomplement IC40-50 0.01 mM/l gpg    | Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. <i>Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D)</i> , 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin.                    |
| Anticomplement IC80-90 0.05 mM/l gpg    | Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. <i>Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D)</i> , 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin.                    |
| Antiedemic IC36=40 mg/kg ipr rat        |   |
| Antifertility                           |   |
| Antigingivitic MIC=625-1,250 ug/ml      |   |
| Antihepatotoxic                         |   |
| Antihyperlipidemic                      |   |
| Antiinflammatory 40 mg/kg ipr           | Aquino, R., De Feo, V., De Simone, F., Pizza, C.*, and Cirino, G. Plant Metabolites. New Compounds And Anti-Inflammatory Activity Of <i>Uncaria tomentosa</i> . <i>Journal of Natural Products</i> , 54(2): 453-459, 1991.            |
| Antiischemic 40 mg/kg                   |   |
| Antileukemic                            | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46.  |
| Antileukotriene IC50=17 uM              |   |
| Antimalarial IC50=70-89 ug/ml           |   |
| Antinephritic IC50=19-24 uM             |   |
| Antioxidant                             | Balanehru, S. and Nagarajan, B. 1992. Intervention of Adriamycin Induced Free Radical Damage. <i>Biochemistry International</i> 28(4): 735-744, 1992.   |
| Antioxidant IC46=10 uM                  |   |
| Antiperiodontic MIC=625-1,250 ug/ml     |   |
| Antiperoxidant IC30=200 ug/ml           |   |
| Antiplatelet MIC=625-1,250 ug/ml        |   |
| Antiplasmodial IC50=70-89 ug/ml         |   |
| Antisarcinomic                          |   |
| Antiseptic MIC=625-1,250 ug/ml          |   |
| Antitumor                               |   |
| Antitumor (Breast)                      | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46.  |
| Antitumor (Colon)                       | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46.  |
| Antitumor (Kidney)                      | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46.  |
| Antitumor (Lung)                        | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46.  |
| Antitumor (Pancreas)                    | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46.  |
| Antiulcer >carbenoxolone                |   |
| Antiviral EC50=1.7 ug/ml                | Kashiwada, Y., et. al. 1998. Anti-AIDS Agents. 30. Anti-HIV Activity of Oleanolic Acid, Pomolic Acid, and Structurally Related Triterpenoids. <i>J. Nat. Prod.</i> , 61(9): 1090-1095.  |
| Antiviral IC50=21.8 ug/ml               | Kashiwada, Y., et. al. 1998. Anti-AIDS Agents. 30. Anti-HIV Activity of Oleanolic Acid, Pomolic Acid, and Structurally Related Triterpenoids. <i>J. Nat. Prod.</i> , 61(9): 1090-1095.  |
| Aromatase-Inhibitor                     |   |
| Beta-Blocker                            |   |
| Beta-Glucuronidase-Inhibitor ~100 mg/kg |   |
| COX-2-Inhibitor IC50=295 uM/            |   |
| COX-2-Inhibitor                         | Ringbom, T., Seguar, L., Noreen, Y., Perera, P., Bohlin, L. 1998. Ursolic Acid from <i>Plantago major</i> , a Selective Inhibitor of Cyclooxygenase-2 Catalyzed Prostaglandin Biosynthesis. <i>J. Nat. Prod.</i> , 61(10): 1212-1215. |
| Cancer-Preventive                       | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.   |
| Cardioprotective 40 mg/kg               |   |
| Cardiotonic                             |   |
| Cyclooxygenase-Inhibitor                |   |
| Diuretic                                | Leung, A. Y. and Foster, S. 1995. <i>Encyclopedia of Common Natural Ingredients</i> 2nd Ed. John Wiley & Sons, New York. 649 pp.  |
| Elastase-Inhibitor IC50=~15 uM          |   |
| Hepatoprotective                        | Advance in Chinese Medicinal Materials Research. 1985. Eds. H. M. Chang, H. W. Yeung, W. -W. Tso and A. Koo. World Scientific Publishing Co., Philadelphia Pa., page 211.   |
| Hypolipemic                             |   |
| Hypotensive                             |   |
| Immunomodulator                         |   |
| Leucocytogenic                          |   |
| NF-kB-Inhibitor                         |   |
| Phagocytotic                            |   |



|                                   |  |  |  |  |  |
|-----------------------------------|--|--|--|--|--|
| Piscicide                         | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |  |  |  |  |
| Prostaglandin-Synthesis-Inhibitor | igs mus  |  |  |  |  |
| Sedative                          |  |  |  |  |  |
| Uterotonic                        |  |  |  |  |  |
| Vasopressor                       |  |  |  |  |  |

|               |       |    |    |  |   |
|---------------|-------|----|----|--|---|
| PALMITIC-ACID | Fruit | -- | -- |  | * |
|---------------|-------|----|----|--|---|

| Activities (13)             |  |  |  |  |  |
|-----------------------------|--|--|--|--|--|
| 5-Alpha-Reductase-Inhibitor |  |  |  |  |  |
| Antiallopecic               |  |  |  |  |  |
| Antiandrogenic              |  |  |  |  |  |
| Antifibrinolytic            | Economic & Medicinal Plant Research, 1: 53.  |  |  |  |  |
| Antioxidant IC40=60         |  |  |  |  |  |
| FLavor FEMA 1               | Aloe Research Council - Duke writeup of non-peer reviewed book by Coats and draft by Henry   |  |  |  |  |
| Hemolytic                   | Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 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.                         |  |  |  |  |
| Pesticide                   |  |  |  |  |  |
| Propecic                    |  |  |  |  |  |
| Soap                        | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |  |  |  |  |

|                |       |    |    |  |   |
|----------------|-------|----|----|--|---|
| PHENETHYLAMINE | Plant | -- | -- |  | * |
|----------------|-------|----|----|--|---|

| Activities (3) |   |  |  |  |  |
|----------------|---|--|--|--|--|
| Insectifuge    | Grainge, M. and Ahmed, S., Handbook of Plants with Pest-Control Properties, John Wiley & Sons, New York, NY, 1988, 470. |  |  |  |  |
| Irritant       | Merck 11th Edition  |  |  |  |  |
| Pesticide      |   |  |  |  |  |

|            |      |    |        |       |   |
|------------|------|----|--------|-------|---|
| PHOSPHORUS | Leaf | -- | 2400.0 | -0.47 | * |
|------------|------|----|--------|-------|---|

| 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. |  |  |  |  |

|           |      |    |         |      |   |
|-----------|------|----|---------|------|---|
| POTASSIUM | Leaf | -- | 12200.0 | -0.8 | * |
|-----------|------|----|---------|------|---|

| 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 | Leaf | -- | 119000.0 | -0.93 | * |
|---------|------|----|----------|-------|---|

|                         |       |    |    |  |   |
|-------------------------|-------|----|----|--|---|
| QUERCETIN-3-ARABINOSIDE | Plant | -- | -- |  | * |
|-------------------------|-------|----|----|--|---|

|                          |       |    |    |  |   |
|--------------------------|-------|----|----|--|---|
| QUERCETIN-3-O-RHAMNOSIDE | Plant | -- | -- |  | * |
|--------------------------|-------|----|----|--|---|

**Activities (1)**

## Anticomplementary

|           |       |    |    |   |
|-----------|-------|----|----|---|
| QUERCITOL | Plant | -- | -- | * |
| RESIN     | Plant | -- | -- | * |
| RHAMNOSE  | Plant | -- | -- | * |
| SELENIUM  | Leaf  | -- | -- | * |

**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.

Antiaaggregant 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).

Antimaaculitic

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.

Antiosteoarthritis

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 &amp; 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 &amp; 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 &amp; 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 (Curcuma longa) for Gastric and Duodenal Antiulcer Activity in Rats. J. of Ethnopharmacology, 29: 25-34, 1990.

Anxiolytic

Apoptotic

Cancer-Preventive

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

|  |  |  |  |  |   |
|--|--|--|--|--|---|
| Cardioprotective 200 ug/day                |  |  |  |  |   |
| Depressant                                 |  |  |  |  | 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.                         |
| Fungicide                                  |  |  |  |  | Davies, S., and Stewart, A. 1990. Nutritional Medicine. 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 reserve 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. J. Pharm. Pharmacol. 42: 655-657, 1990. |
| Protein-Kinase-C-Inhibitor<br>IC50=2-50 uM |  |  |  |  |   |
| VEGF-Inhibitor                             |  |  |  |  |   |

SILICON Leaf -- -- \*

**Activities (4)**

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

SINAPIC-ACID Plant -- -- \*

**Activities (9)**

- Antibacterial Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
- Antihepatotoxic Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
- Antioxidant IC27=30 ppm
- Antiperoxynitrite IC39=5 uM
- Antiperoxynitrite IC60=20 uM
- Antiperoxynitrite IC75=100 uM
- Cancer-Preventive Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.
- Fungicide Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
- Pesticide

SODIUM Leaf -- 49.0 -0.64 \*

**Activities (1)**

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

STARCH Stem -- -- \*

**Activities (5)**

- Absorbent Martindale's 29th
- Antidote (Iodine) Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
- Antinesidioblastotic Martindale's 29th
- Emollient Martindale's 29th
- Poultice Martindale's 29th

SYRINAGRESINOL Shoot -- -- \*

SYRINGARESINOL-MONO-O-GLUCOSIDE Plant -- -- \*

SYRINGENIN-4'-APIOSYL-GLUCOSIDE Plant -- -- \*

SYRINGENIN-4'-O-GLUCOSIDE Plant -- -- \*

SYRINGIN Plant -- -- \*

| Activities (9)    |  |  |  |  |  |
|-------------------|--|--|--|--|--|
| ACE-Inhibitor     |  |  |  |  |  |
| Adaptogenic       |  |  |  |  |  |
| Anticomplementary |  |  |  |  |  |
| Antipyretic       |  |  |  |  |  |
| Antistress        |  |  |  |  |  |
| Immunomodulator   |  |  |  |  |  |
| Immunostimulant   |  |  |  |  |  |
| Neurotropic       |  |  |  |  |  |
| Tonic             |  |  |  |  |  |

TIN Leaf -- 18.0 0.29 \*

| Activities (4) |  |  |  |                   |  |
|----------------|--|--|--|-------------------|--|
| Antiacne       |  |  |  |                   |  |
| Antibacterial  |  |  |  |                   |  |
| Pesticide      |  |  |  |                   |  |
| Taenicide      |  |  |  | Martindale's 28th |  |

TYRAMINE Plant -- -- \*

| Activities (11)                 |  |  |  |  |  |
|---------------------------------|--|--|--|--|--|
| Adrenergic                      |  |  |  | Merck 11th Edition   |  |
| Antiaggregant                   |  |  |  |  |  |
| Cardiovascular 0.8 ivn cat      |  |  |  | Borchard, R. E., Barnes, C. D., and Eltherton, L. G. 1991. Drug Dosage in Laboratory Animals: A Handbook. (3rd Ed.) The Telford Press, Inc., P. O. Box 287, Caldwell NJ 07006. |  |
| Cardiovascular 30 mg/kg scu mus |  |  |  | Borchard, R. E., Barnes, C. D., and Eltherton, L. G. 1991. Drug Dosage in Laboratory Animals: A Handbook. (3rd Ed.) The Telford Press, Inc., P. O. Box 287, Caldwell NJ 07006. |  |
| Hypertensive                    |  |  |  | Nigg, H.N. and Seigler, D.S., eds. 1992. Phytochemical Resources for Medicine and Agriculture. Plenum Press, New York. 445 pp.   |  |
| Insectifuge                     |  |  |  | Grainge, M. and Ahmed, S., Handbook of Plants with Pest-Control Properties, John Wiley & Sons, New York, NY, 1988, 470.  |  |
| Neurotoxic 1 mg/kg ivn dog      |  |  |  | Borchard, R. E., Barnes, C. D., and Eltherton, L. G. 1991. Drug Dosage in Laboratory Animals: A Handbook. (3rd Ed.) The Telford Press, Inc., P. O. Box 287, Caldwell NJ 07006. |  |
| Pesticide                       |  |  |  |  |  |
| Sympathomimetic                 |  |  |  |  |  |
| Vasoconstrictor                 |  |  |  |  |  |
| Vasopressor                     |  |  |  |  |  |

VISCIC-ACID Sg -- -- \*

VISCIC-ACID Shoot -- -- 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.

VISCIN Plant -- -- \*

VISCOTOXIN Plant -- -- \*

| Activities (1) |  |  |  |  |  |
|----------------|--|--|--|--|--|
| Cardiac        |  |  |  |  |  |

WATER Leaf -- 798000.0 -0.05 \*

XANTHOPHYLL Plant -- -- \*

| Activities (3) |  |  |  |  |  |
|----------------|--|--|--|--|--|
| Bruchifuge     |  |  |  |  |  |
| Insectifuge    |  |  |  | Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990. |  |
| Pesticide      |  |  |  |  |  |

ZINC Leaf -- 86.0 0.0 \*

| 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                      |  |
| Antialoepic                        | 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 |
| Leptinogenic 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.   |
| Testosteronogenic 60 mg/day                | Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.   |
| Trichomonicide                             | Martindale's 29th  |
| Vulnerary                                  | Martindale's 28th  |