

List of All Chemicals

P Crataegus monogyna (Rosaceae)

Common name(s)

English Hawthorn; Hawthorn

How used

Medicinal

*Unless otherwise noted all references are to Duke, James A. 1992. Handbook of phytochemical constituents of GRAS herbs and other economic plants. Boca Raton, FL. CRC Press.

| Chemical | Part | All | Low PPM | High PPM | StdDev | *Reference |
|--------------|-------|-----|---------|----------|--------|---|
| (+)-CATECHIN | Plant | -- | -- | | | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp. |

Activities (30)

ACE-Inhibitor IC50=0.155 mM/l

ACE-Inhibitor 0.24 mg/ml rbt (weak activity)

AntiHIV EC50=4 ug/ml

Antiaggregant IC68=200 ug/ml

Anticoagulant

Anticomplementary 1/2 aspirin

Antiinflammatory IC50=40-943 uM (cf indomethacin IC50=1 uM)

Antimutagenic ID50=50-100 nM

Phenolic Compounds in Food and Their Effects on Health. Antioxidants & Cancer Prevention. Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. ACS Symposium Series 507.ACS, Washington 402 pp.

Antioxidant

Antiperoxidant

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

Antiprostaglandin IC50=40-943 uM (cf indomethacin IC50=1 uM)

Antiradicular

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

Antiulcer

Beta-Adrenergic Receptor Blocker 10 uM (weak activity)

Zhu, M., Phillipson, J. D., Greengrass, P. M., Bowery, N. E., Cai, Y. 1997. Plant Polyphenols: Biologically Active Compounds or Non-Selective Binders to Protein? Phytochemistry, 44(3): 441-447.

COX-1-Inhibitor IC50=183-279 uM (cf indomethacin IC50=1 uM)

COX-2-Inhibitor IC50=546-5,910 uM (cf indomethacin IC50=1 uM)

Cancer-Preventive

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

Cardiotonic

Cyclooxygenase-Inhibitor

Cytotoxic TC50=>100 ug/ml

Dermatitigenic

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

Hemostat

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

Hepatoprotective

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

Immunostimulant

Economic & Medicinal Plant Research, 1: 124.

NO-Inhibitor IC11=250 uM

Neuroprotective 1-10 uM

Phagocytotic

Economic & Medicinal Plant Research, 1: 124.

Vasoconstrictor

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

Xanthine-Oxidase-Inhibitor

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

cAMP-Phosphodiesterase-Inhibitor

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

Activities (38)

5-Lipoxygenase-Inhibitor IC50=22-50 uM/l

ACE-Inhibitor IC50=0.216 mM/l

ACE-Inhibitor 0.5 mg/ml rbt (weak activity)

Allelochemic Hanke, F. J., Natural Products as a Resource for Biologically Active Compounds, Thesis, U. Cal (Santa Cruz), 1986, 252 pp

AntiEBV Economic & Medicinal Plant Research, 6: 189.

AntiHIV EC50=2 ug/ml

Antiaggregant

Antianaphylactic

Antibacterial

Antidiabetic 30 mg/kg rat

Antihepatic Vlietinck, A.J. and Dommissie, R.A. eds. 1985. Advances in Medicinal Plant Research. Wiss. Verlag. Stuttgart.

Antihyperglycemic

Antiinflammatory

Antileukemic Economic & Medicinal Plant Research, 6: 189.

Antileukotriene

Antilipoperoxidant

Antimutagenic

Antioxidant IC50=6.3 ug/ml

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

Antiviral EC50=2 ug/ml

Beta-Adrenergic Receptor Blocker 10 uM Zhu, M., Phillipson, J. D., Greengrass, P. M., Bowery, N. E., Cai, Y. 1997. Plant Polyphenols: Biologically Active Compounds or Non-Selective Binders to Protein? Phytochemistry, 44(3): 441-447.

COMP-Inhibitor Dullo, A. G., et al. 1999. Efficacy of a green tea extract rich in catechin polyphenols and caffeine in increasing 24-h energy expenditure and fat oxidation in humans. Am. J. Clinical Nutrition, 70: 1040-1045.

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

Cardiotonic

Choline-Sparing

Cytotoxic TC50=>100 ug/ml

Hypocholesterolemic

Hypoglycemic

Immunostimulant

Insulinogenic Economic & Medicinal Plant Research, 6: 170.

Lipoxygenase-1-Inhibitor IC50=60 mM

Lipoxygenase-Inhibitor IC50=140 uM Phenolic Compounds in Food and Their Effects on Health. Antioxidants & Cancer Prevention. Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. ACS Symposium Series 507.ACS, Washington 402 pp.

Lipoxygenase-Inhibitor IC97=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.

Pancreatogenic

Pesticide

Reverse-Transcriptase-Inhibitor 10 ng/ml McKenna, D. J., Hughes, K., and Jones, K. 2000. Green Tea Monograph. Alternative Therapies, 6(3): 61-82.

Vasodilator uM McKenna, D. J., Hughes, K., and Jones, K. 2000. Green Tea Monograph. Alternative Therapies, 6(3): 61-82.

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

| | | | | |
|--------------------------------|--------|----|--------|---|
| 2''-O-RHAMNOSIDE-ISORIENTIN | Leaf | -- | -- | * |
| 2''-O-RHAMNOSIDE-ISOVITEXIN | Leaf | -- | -- | * |
| 2''-O-RHAMNOSYL-ISORIENTIN | Flower | -- | -- | * |
| 2''-O-RHAMNOSYL-ISOVITEXIN | Flower | -- | -- | * |
| 2''-O-RHAMNOSYL-ORIENTIN | Flower | -- | -- | * |
| 2''-O-RHAMNOSYL-VITEXIN | Flower | -- | -- | * |
| 2-ALPHA-HYDROXY-OLEANOLIC-ACID | Plant | -- | -- | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| 2-PHENYLCHROMONE | Flower | -- | -- | * |
| 4'-ACETYL-2-RHAMNOSIDE | Plant | -- | 5000.0 | * |
| ACANTOLIC-ACID | Plant | -- | -- | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp. |

ACETYL-CHOLINE

Plant

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

Activities (19)

| | |
|--|--|
| Allergenic | |
| Antiamblyopic | |
| Antidiuretic | |
| Antileus | |
| Antitachycardic | |
| Cardiodepressant | Martindale's 29th |
| Cerebrostimulant | |
| Histaminic | |
| Hypotensive | |
| Miotic | Martindale's 29th |
| Myocontractant 2 uM | |
| Myopic | |
| Myotonic | Martindale's 29th |
| Neurotransmitter | |
| Parasympathomimetic 0.002 mg/kg ivn rat | 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. |
| Peristaltic | |
| Sialogogue | |
| Spasmogenic Antidote=600 ug atropine sulfate ivn ims scu hmn | |
| Vasodilator | |

ADENINE

Plant

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

Activities (11)

| | |
|----------------------|---|
| Antianemic 1.5 g/day | Martindale's 28th |
| Antigranulocytopenic | |
| Antiviral | |
| CNS-Stimulant | |
| Diuretic | |
| Hyperuricemic | Martindale's 28th |
| Insectifuge | Tunon, H., Thorsell, W., and Bohlin, L. 1993. Mosquito Repelling Activity of Compounds Occurring in <i>Achillea millefolium</i> L. (Asteraceae). <i>Economic Botany</i> 48(2): 111-120, 1994. |
| Lithogenic | |
| Myocardiotonic | |
| Pesticide | |
| Vasodilator | |

ADENOSINE

Plant

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

Activities (28)

| | |
|----------------------------------|--|
| Analgesic | |
| Antiaggregant | |
| Antiarrhythmic | Merck 11th Edition |
| Antidiuretic | LAWSON in Koch, H. P. and Lawson, L. D., eds. 1996. Garlic- The Science and therapeutic application of <i>Allium sativum</i> L. and related species. Williams & Wilkins, Baltimore. 329 pp. |
| Antididotoxic 500 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 | LAWSON in Koch, H. P. and Lawson, L. D., eds. 1996. Garlic- The Science and therapeutic application of <i>Allium sativum</i> L. and related species. Williams & Wilkins, Baltimore. 329 pp. |
| Antiinsomniac | |
| Antilipolytic | |
| Antispasmodic | |
| Antitachycardic 50-250 ug/kg/ivn | Martindale's 29th |
| Anxiolytic | |
| Arteriodilator | |
| Glucogonogenic | LAWSON in Koch, H. P. and Lawson, L. D., eds. 1996. Garlic- The Science and therapeutic application of <i>Allium sativum</i> L. and related species. Williams & Wilkins, Baltimore. 329 pp. |
| Hypocholesterolemic | LAWSON in Koch, H. P. and Lawson, L. D., eds. 1996. Garlic- The Science and therapeutic application of <i>Allium sativum</i> L. and related species. Williams & Wilkins, Baltimore. 329 pp. |
| Hypoglycemic | |
| Hypotensive | LAWSON in Koch, H. P. and Lawson, L. D., eds. 1996. Garlic- The Science and therapeutic application of <i>Allium sativum</i> L. and related species. Williams & Wilkins, Baltimore. 329 pp. |
| Immunomodulator | |
| Insulinic | |
| Laxative | |
| Lipolytic | LAWSON in Koch, H. P. and Lawson, L. D., eds. 1996. Garlic- The Science and therapeutic application of <i>Allium sativum</i> L. and related species. Williams & Wilkins, Baltimore. 329 pp. |
| Myorelaxant | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| PAF-Inhibitor IC50=90 nM | |
| PAF-Inhibitor 0.024 ug/ml | |
| Pyrogenic 0.09 mg/kg ivn hmn | Conradson, T. B. G., Dixon, C. M. S., Clarke, B., Barnes, P. J. 1987. Cardiovascular Effects of Infused Adenosine in Man: Potentiation by Dipyridamole. <i>Acta Physiol Scand</i> , 129(3): 387-391. |
| Respirastimulant | Martindale's 29th |
| Secretomotor | |
| Sedative | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| Vasodilator | |

AESCULIN

Inflorescence -- --

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| Antiinflammatory IC ₆₅ =1,000 uM | |
| Antileukemic 20-50 uM | |
| Antimelanomic 1-50 uM | |
| Antimetastatic 1-50 uM | |
| Antimutagenic ID ₅₀ =10-40 nM | Phenolic Compounds in Food and Their Effects on Health. Antioxidants & Cancer Prevention. Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. ACS Symposium Series 507.ACS, Washington 402 pp. |
| Antimutagenic ID ₅₀ =0.55 ug/ml | |
| Antioxidant 1.5 x Vit. E | |
| Antioxidant IC _{28.5} =62.5 ug/ml | |
| Antiperistaltic | |
| Antiproliferant 1-50 uM | |
| Antiproliferant IC ₅₀ =155 uM | |
| Antispasmodic EC ₅₀ =1-5 uM | |
| Antistress 10 mg/kg | |
| Antithyroid | Jim Duke's personal files. |
| Antitumor 1-50 uM | |
| Antitumor (Breast) 1-50 uM | |
| Antitumor (Lung) | |
| Antitumor (Skin) | |
| Antiviral 20-54 ug/ml | |
| Anxiolytic 10 mg/kg | |
| Apoptotic 12-60 uM | |
| Aromatase-Inhibitor IC ₆₅ =1 uM/l | Journal of Medicinal Food 2: 235.1999. |
| Beta-Glucuronidase-Inhibitor IC ₅₀ =~40 uM | |
| CNS-Depressant | |
| COX-1-Inhibitor IC ₆₅ =1,000 uM | |
| COX-2-Inhibitor IC ₆₅ >1,000 uM | |
| COX-2-Inhibitor <40 uM | |
| COX-2-Inhibitor IC ₅₀ =<15 uM | |
| Calcium-Antagonist? | Biochimica & Biophysica Acta, 1115: 69, 1991. |
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Choleretic | |
| Cyclooxygenase-Inhibitor | |
| Cytochrome-P450-1A1-Inhibitor | |
| Cytotoxic IC ₈₈ =10 ug/ml | Planta Medica, 57: A113, 1991. |
| Cytotoxic 1-50 uM | |
| Cytotoxic IC ₅₀ =9.5 uM | |
| DNA-Protective | |
| Deiodinase-Inhibitor | Jim Duke's personal files. |
| Differentiator MIC=30 uM | |
| Differentiator IC ₄₀ =40 uM | |
| Diuretic | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Estrogenic EC ₅₀ =0.1-25 uM/l | Journal of Medicinal Food 2: 227.1999. |
| Estrogenic 16% genistein | |
| Estrogenic EC ₅₀ =1 uM | |
| HIF-1alpha-Inhibitor | |
| Hyaluronidase-Inhibitor IC ₅₀₊ =50-250 uM | |
| Hypotensive | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| ICAM-1-Inhibitor | |
| IKK-Inhibitor | |
| Inotropic | |
| Interleukin-6-Inhibitor | |
| MAO-Inhibitor | |
| MAPK-Inhibitor | |
| Musculotropic | Wichtl, M. 1984. Teedrogen. Ein Handbuch fur Apotheker und Arzte. Wissenschaftliche Verlagsgesellschaft. mbH Stuttgart. 393 pp. |
| Mutagenic | |
| Myorelaxant | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| NADH-Oxidase-Inhibitor | |

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|--|--|
| NF-kB-Inhibitor | |
| NO-Synthase-Inhibitor 5-50 uM | |
| Nodulation-Signal | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants.</i> Taylor & Frost, London. 791 pp. |
| Ornithine-Decarboxylase-Inhibitor | |
| P21-Inducer 10-70 uM | |
| PKC-Inhibitor IC50=10 uM | |
| PTK-Inhibitor 10-100 uM | |
| Pesticide | |
| Polyamine-Synthesis-Inhibitor | |
| Progestational | |
| Protein-Kinase-C-Inhibitor IC50=10-40 uM | |
| Quinone-Reductase-Inducer 20 uM | Uda, Y., Price, K. R., Williamson, G., Rhodes, M. J. C. 1997. Induction of the Anticarcinogenic Marker Enzyme, Quinone Reductase, in Murine Hepatoma Cells In Vitro by Flavonoids. <i>Cancer Lett.</i> , 120 (2): 213-216. |
| Radioprotective | |
| Sedative 30-100 mg/kg | |
| Sunscreen | |
| TNF-alpha-Inhibitor IC50=3.27 uM | |
| Topoisomerase-I-Inhibitor | Santti, R., Makela, S., Strauss, L., Korman, J., Kostian, M. L. 1998. Phytoestrogens: Potential Endocrine Disruptors in Males. <i>Toxicol Ind Health</i> , 14: 223-237. |
| Topoisomerase-II-Inhibitor 50 ug/ml | Azuma, Y., Onishi, Y., Sato, Y., Kizaki, H. 1995. Effects of Protein Tyrosine Kinase Inhibitors With Different Modes of Action on Topoisomerase Activity and Death of IL-2-Dependent CTLL-2-Cells. <i>J Biochemistry</i> , 118: 312-318. |
| Topoisomerase-II-Inhibitor IC28=18 uM | |
| Topoisomerase-II-Inhibitor IC45=180 uM | |
| Uterotrophic EC50=0.1-25 uM/l | <i>Journal of Medicinal Food</i> 2: 227.1999. |
| VEGF-Inhibitor IC50=2-7 uM | |
| Vasodilator | |
| Xanthine-Oxidase-Inhibitor 0.36 uM | |
| iNOS-Inhibitor IC50=<15 uM | |

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|----------|-------|----|----|---|
| APIGENIN | Fruit | -- | -- | Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. <i>Herbal Medicine - A Guide for Health-care Professionals.</i> The Pharmaceutical Press, London. 296pp. |
|----------|-------|----|----|---|

Activities (101)

| | |
|---------------------------------|--|
| 11B-HSD-Inhibitor | |
| AntiADD | |
| AntiHIV IC72=200 ug/ml | |
| AntiHIV IC50=143 ug/ml | |
| Antiaflatoxin IC50=9.52 uM | |
| Antiaflatoxin IC50=2.57 ppm | |
| Antiaggregant | |
| Antiaging | |
| Antiallergic | Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine.</i> John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiangiogenic 4 uM | |
| Antiarrhythmic | |
| Antibacterial | Recio, M. C., Rios, J. L., and Villar, A., A review of some antimicrobial compounds isolated from medicinal plants reported in the literature 1978-1988, <i>Phytotherapy Research</i> , 3(4), 1989, 117-125. |
| Anticancer (Lung) | |
| Anticomplementary | |
| Antidermatitic | Bisset, N.G., ed. 1994. <i>Herbal Drugs and Phytopharmaceuticals.</i> CRC Press. Boca Raton, FL. 566 pp. |
| Antiestrogenic | Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine.</i> John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiherpetic 20-54 ug/ml | |
| Antihistaminic IC50=10-35 uM | |
| Antiinflammatory #NAME? | |
| Antiinflammatory IC~65=1,000 uM | |
| Antileukemic 20-50 uM | |
| Antimelanomic 1-50 uM | |
| Antimetastatic 1-50 uM | |
| Antimutagenic ID50=10-40 nM | Phenolic Compounds in Food and Their Effects on Health. <i>Antioxidants & Cancer Prevention.</i> Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. ACS Symposium Series 507.ACS, Washington 402 pp. |
| Antimutagenic ID50=0.55 ug/ml | |

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|--|--|
| Antioxidant 1.5 x Vit. E | |
| Antioxidant IC28.5=62.5 ug/ml | |
| Antiperistaltic | |
| Antiproliferant 1-50 uM | |
| Antiproliferant IC50=155 uM | |
| Antispasmodic EC50=1-5 uM | |
| Antistress 10 mg/kg | |
| Antithyroid | Jim Duke's personal files. |
| Antitumor 1-50 uM | |
| Antitumor (Breast) 1-50 uM | |
| Antitumor (Lung) | |
| Antitumor (Skin) | |
| Antiviral 20-54 ug/ml | |
| Anxiolytic 10 mg/kg | |
| Apoptotic 12-60 uM | |
| Aromatase-Inhibitor IC65=1 uM/l | Journal of Medicinal Food 2: 235.1999. |
| Beta-Glucuronidase-Inhibitor IC50=-40 uM | |
| CNS-Depressant | |
| COX-1-Inhibitor IC65=1,000 uM | |
| COX-2-Inhibitor IC>65=1,000 uM | |
| COX-2-Inhibitor <40 uM | |
| COX-2-Inhibitor IC50=<15 uM | |
| Calcium-Antagonist? | Biochimica & Biophysica Acta, 1115: 69, 1991. |
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Choleretic | |
| Cyclooxygenase-Inhibitor | |
| Cytochrome-P450-1A1-Inhibitor | |
| Cytotoxic IC88=10 ug/ml | Planta Medica, 57: A113, 1991. |
| Cytotoxic 1-50 uM | |
| Cytotoxic IC50=9.5 uM | |
| DNA-Protective | |
| Deiodinase-Inhibitor | Jim Duke's personal files. |
| Differentiator MIC=30 uM | |
| Differentiator IC40=40 uM | |
| Diuretic | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Estrogenic EC50=0.1-25 uM/l | Journal of Medicinal Food 2: 227.1999. |
| Estrogenic 16% genistein | |
| Estrogenic EC50=1 uM | |
| HIF-1alpha-Inhibitor | |
| Hyaluronidase-Inhibitor IC50+=50-250 uM | |
| Hypotensive | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| ICAM-1-Inhibitor | |
| IKK-Inhibitor | |
| Inotropic | |
| Interleukin-6-Inhibitor | |
| MAO-Inhibitor | |
| MAPK-Inhibitor | |
| Musculotropic | Wichtl, M. 1984. Teedrogen. Ein Handbuch fur Apotheker und Arzte. Wissenschaftliche Verlagsgesellschaft. mbH Stuttgart. 393 pp. |
| Mutagenic | |
| Myorelaxant | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| NADH-Oxidase-Inhibitor | |
| NF-kB-Inhibitor | |
| NO-Synthase-Inhibitor 5-50 uM | |
| Nodulation-Signal | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Ornithine-Decarboxylase-Inhibitor | |
| P21-Inducer 10-70 uM | |
| PKC-Inhibitor IC50=10 uM | |
| PTK-Inhibitor 10-100 uM | |

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|---|--|
| Pesticide | |
| Polyamine-Synthesis-Inhibitor | |
| Progestational | |
| Protein-Kinase-C-Inhibitor IC50=10-40 uM | |
| Quinone-Reductase-Inducer 20 uM | Uda, Y., Price, K. R., Williamson, G., Rhodes, M. J. C. 1997. Induction of the Anticarcinogenic Marker Enzyme, Quinone Reductase, in Murine Hepatoma Cells In Vitro by Flavonoids. <i>Cancer Lett.</i> , 120 (2): 213-216. |
| Radioprotective | |
| Sedative 30-100 mg/kg | |
| Sunscreen | |
| TNF-alpha-Inhibitor IC50=3.27 uM | |
| Topoisomerase-I-Inhibitor | Santti, R., Makela, S., Strauss, L., Korman, J., Kostian, M. L. 1998. Phytoestrogens: Potential Endocrine Disruptors in Males. <i>Toxicol Ind Health</i> , 14: 223-237. |
| Topoisomerase-II-Inhibitor 50 ug/ml | Azuma, Y., Onishi, Y., Sato, Y., Kizaki, H. 1995. Effects of Protein Tyrosine Kinase Inhibitors With Different Modes of Action on Topoisomerase Activity and Death of IL-2-Dependent CTLL-2-Cells. <i>J Biochemistry</i> , 118: 312-318. |
| Topoisomerase-II-Inhibitor IC28=18 uM | |
| Topoisomerase-II-Inhibitor IC45=180 uM | |
| Uterotrophic EC50=0.1-25 uM/l | Journal of Medicinal Food 2: 227.1999. |
| VEGF-Inhibitor IC50=2-7 uM | |
| Vasodilator | |
| Xanthine-Oxidase-Inhibitor 0.36 uM | |
| iNOS-Inhibitor IC50=<15 uM | |

APIGENIN Flower -- -- *

Activities (101)

| | |
|------------------------------------|--|
| 11B-HSD-Inhibitor | |
| AntiADD | |
| AntiHIV IC72=200 ug/ml | |
| AntiHIV IC50=143 ug/ml | |
| Antiaflatoxin IC50=9.52 uM | |
| Antiaflatoxin IC50=2.57 ppm | |
| Antiaggregant | |
| Antianging | |
| Antiallergic | Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiangiogenic 4 uM | |
| Antiarrhythmic | |
| Antibacterial | Recio, M. C., Rios, J. L., and Villar, A., A review of some antimicrobial compounds isolated from medicinal plants reported in the literature 1978-1988, <i>Phytotherapy Research</i> , 3(4), 1989, 117-125. |
| Anticancer (Lung) | |
| Anticomplementary | |
| Antidermatitic | Bisset, N.G., ed. 1994. <i>Herbal Drugs and Phytopharmaceuticals</i> . CRC Press. Boca Raton, FL. 566 pp. |
| Antiestrogenic | Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiherpetic 20-54 ug/ml | |
| Antihistaminic IC50=10-35 uM | |
| Antiinflammatory #NAME? | |
| Antiinflammatory IC~65=1,000 uM | |
| Antileukemic 20-50 uM | |
| Antimelanomic 1-50 uM | |
| Antimetastatic 1-50 uM | |
| Antimutagenic ID50=10-40 nM | Phenolic Compounds in Food and Their Effects on Health. <i>Antioxidants & Cancer Prevention</i> . Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. ACS Symposium Series 507.ACS, Washington 402 pp. |
| Antimutagenic ID50=0.55 ug/ml | |
| Antioxidant 1.5 x Vit. E | |
| Antioxidant IC28.5=62.5 ug/ml | |
| Antiperistaltic | |
| Antiproliferant 1-50 uM | |
| Antiproliferant IC50=155 uM | |
| Antispasmodic EC50=1-5 uM | |
| Antistress 10 mg/kg | |
| Antithyroid | Jim Duke's personal files. |

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| Antitumor 1-50 uM | |
| Antitumor (Breast) 1-50 uM | |
| Antitumor (Lung) | |
| Antitumor (Skin) | |
| Antiviral 20-54 ug/ml | |
| Anxiolytic 10 mg/kg | |
| Apoptotic 12-60 uM | |
| Aromatase-Inhibitor IC ₆₅ =1 uM/l | Journal of Medicinal Food 2: 235.1999. |
| Beta-Glucuronidase-Inhibitor IC ₅₀ =~40 uM | |
| CNS-Depressant | |
| COX-1-Inhibitor IC ₆₅ =1,000 uM | |
| COX-2-Inhibitor IC ₆₅ =1,000 uM | |
| COX-2-Inhibitor <40 uM | |
| COX-2-Inhibitor IC ₅₀ =<15 uM | |
| Calcium-Antagonist? | Biochimica & Biophysica Acta, 1115: 69, 1991. |
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Choleretic | |
| Cyclooxygenase-Inhibitor | |
| Cytochrome-P450-1A1-Inhibitor | |
| Cytotoxic IC ₈₈ =10 ug/ml | Planta Medica, 57: A113, 1991. |
| Cytotoxic 1-50 uM | |
| Cytotoxic IC ₅₀ =9.5 uM | |
| DNA-Protective | |
| Deiodinase-Inhibitor | Jim Duke's personal files. |
| Differentiator MIC=30 uM | |
| Differentiator IC ₄₀ =40 uM | |
| Diuretic | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Estrogenic EC ₅₀ =0.1-25 uM/l | Journal of Medicinal Food 2: 227.1999. |
| Estrogenic 16% genistein | |
| Estrogenic EC ₅₀ =1 uM | |
| HIF-1alpha-Inhibitor | |
| Hyaluronidase-Inhibitor IC ₅₀ + =50-250 uM | |
| Hypotensive | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| ICAM-1-Inhibitor | |
| IKK-Inhibitor | |
| Inotropic | |
| Interleukin-6-Inhibitor | |
| MAO-Inhibitor | |
| MAPK-Inhibitor | |
| Musculotropic | Wichtl, M. 1984. Teedrogen. Ein Handbuch fur Apotheker und Arzte. Wissenschaftliche Verlagsgesellschaft. mbH Stuttgart. 393 pp. |
| Mutagenic | |
| Myorelaxant | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| NADH-Oxidase-Inhibitor | |
| NF-kB-Inhibitor | |
| NO-Synthase-Inhibitor 5-50 uM | |
| Nodulation-Signal | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Ornithine-Decarboxylase-Inhibitor | |
| P21-Inducer 10-70 uM | |
| PKC-Inhibitor IC ₅₀ =10 uM | |
| PTK-Inhibitor 10-100 uM | |
| Pesticide | |
| Polyamine-Synthesis-Inhibitor | |
| Progestational | |
| Protein-Kinase-C-Inhibitor IC ₅₀ =10-40 uM | |
| Quinone-Reductase-Inducer 20 uM | Uda, Y., Price, K. R., Williamson, G., Rhodes, M. J. C. 1997. Induction of the Anticarcinogenic Marker Enzyme, Quinone Reductase, in Murine Hepatoma Cells In Vitro by Flavonoids. Cancer Lett., 120 (2): 213-216. |
| Radioprotective | |
| Sedative 30-100 mg/kg | |

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|---|--|--|--|--|
| Sunscreen | | | | |
| TNF-alpha-Inhibitor IC50=3.27 uM | | | | |
| Topoisomerase-I-Inhibitor | Santti, R., Makela, S., Strauss, L., Korman, J., Kostian, M. L. 1998. Phytoestrogens: Potential Endocrine Disruptors in Males. <i>Toxicol Ind Health</i> , 14: 223-237. | | | |
| Topoisomerase-II-Inhibitor 50 ug/ml | Azuma, Y., Onishi, Y., Sato, Y., Kizaki, H. 1995. Effects of Protein Tyrosine Kinase Inhibitors With Different Modes of Action on Topoisomerase Activity and Death of IL-2-Dependent CTLL-2-Cells. <i>J Biochemistry</i> , 118: 312-318. | | | |
| Topoisomerase-II-Inhibitor IC28=18 uM | | | | |
| Topoisomerase-II-Inhibitor IC45=180 uM | | | | |
| Uterotrophic EC50=0.1-25 uM/l | Journal of Medicinal Food 2: 227.1999. | | | |
| VEGF-Inhibitor IC50=2-7 uM | | | | |
| Vasodilator | | | | |
| Xanthine-Oxidase-Inhibitor 0.36 uM | | | | |
| iNOS-Inhibitor IC50=<15 uM | | | | |

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|-----------------------|-------|----|----|--|
| APS-SULFOTRANSFERASE | Leaf | -- | -- | * |
| BETA-PHENYLETHYLAMINE | Plant | -- | -- | Leung, A. Y. and Foster, S. 1995. <i>Encyclopedia of Common Natural Ingredients</i> 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| CAFFEIC-ACID | Plant | -- | -- | Leung, A. Y. and Foster, S. 1995. <i>Encyclopedia of Common Natural Ingredients</i> 2nd Ed. John Wiley & Sons, New York. 649 pp. |

Activities (102)

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| 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 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. <i>Oilseed Food Ingredients Used To Minimize Oxidative Flavor Deterioration in Meat Products. Phenolic Compounds in Food and Their Effects on Health</i> , Ch.18. |
| Antinitrosaminic | Ki Soon Rhee. <i>Oilseed Food Ingredients Used To Minimize Oxidative Flavor Deterioration in Meat Products. Phenolic Compounds in Food and Their Effects on Health</i> , Ch.18. |
| Antiophidic | |
| Antioxidant 50 uM | |
| Antioxidant IC57=30 ppm | |
| Antioxidant 1/3 quercetin | |

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|---|---|
| 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 | |

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| Sunscreen IC50=2.5 mg/l | Lazarova*, G., Kostova, I., Neychev, H. 1992. Photodynamic damage prevention by some hydroxycoumarins. <i>Fitoterapia</i> 64(2): 134-136, 1993. |
| Sunscreen IC91=5 mg/l | Lazarova*, G., Kostova, I., Neychev, H. 1992. Photodynamic damage prevention by some hydroxycoumarins. <i>Fitoterapia</i> 64(2): 134-136, 1993. |
| Sunscreen IC98=25 mg/l | Lazarova*, G., Kostova, I., Neychev, H. 1992. Photodynamic damage prevention by some hydroxycoumarins. <i>Fitoterapia</i> 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. <i>Phytotherapy</i> . Churchill Livinston, Edinburgh. |

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|------------------|-------|----|----|--|
| CHLOROGENIC-ACID | Plant | -- | -- | Schussler, M., Fricke, U., Nikolov, N., and Holzl, J. 1991. Comparison of the Flavonoids Occurring in <i>Crataegus</i> species and Inhibition of 3',5'-Cyclic Adenosine Monophosphate Phosphodiesterase. <i>Plant Medica</i> 57: Suppl Issue 2. p.A-133. |
|------------------|-------|----|----|--|

Activities (77)

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| Aldose-Reductase-Inhibitor IC50=1.8 uM rat (strong activity) | Yoshikawa, M., et al. 1999. Medicinal Flowers. I. Aldose Reductase Inhibitors and Three New Eudesmane-Type Sesquiterpenes, Kikkanols A, B, and C, From the Flowers of <i>Chrysanthemum indicum</i> L. <i>Chem Pharm Bull</i> , 47(3): 340-345. |
| Allelochemic | |
| Allergenic | |
| Analgesic | |
| AntiEBV | Economic & Medicinal Plant Research, 6: 189. |
| AntiHIV | Economic & Medicinal Plant Research, 6: 189. |
| AntiLegionella | |
| Antiatherosclerotic | |
| Antibacterial | |
| Anticancer (Colon) | |
| Anticancer (Forestomach) | |
| Anticancer (Liver) | |
| Anticancer (Skin) | |
| Anticarcinogenic | |
| Antidiabetic | |
| Antifeedant | |
| Antigenotoxic | |
| Antigonadotropic | Jim Duke's personal files. |
| Antihemolytic 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. <i>Phytochemistry</i> . 36(3): 579-583. 1994. |
| Antihepatotoxic | |
| Antiherpetic | Economic & Medicinal Plant Research, 5: 194. |
| Antihistaminic | |
| Antihypercholesterolemic | Economic & Medicinal Plant Research, 6: 189. |
| Antihyperthyroid | |
| Antiinflammatory | Hagerman, A.E. Tannin-Protein Interactions. <i>Phenolic Compounds in Food and Their Effects on Health</i> , Ch.19. |
| Antileukotriene | |
| Antimelanogenic | |
| Antimutagenic | |
| Antinitrosaminic | |
| Antioxidant IC53=200 ppm | Huang, M-T., and Ferraro, T. <i>Phenolic Compounds in Food and Cancer Prevention</i> . <i>Phenolic Compounds in Food and Their Effects on Health</i> , Ch.2 p.21. |
| Antioxidant IC80=12 uM | |
| Antioxidant IC50=54.2 uM | |
| Antiperoxidant IC50=36 uM | <i>Planta Medica</i> , 57: A54, 1991. |
| Antipolio | Jim Duke's personal files. |
| 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. <i>Phytochemistry</i> . 36(3): 579-583. 1994. |
| Antiradicular 9 x quercetin | |
| Antiseptic | |
| Antisunburn | |
| Antithyroid | Jim Duke's personal files. |
| 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. |
| Antitumor (Colon) | |
| Antitumor (Forestomach) | |
| Antitumor (Liver) | |
| Antitumor (Skin) | |
| Antitumor-Promoter IC25=10 uM | |
| Antiulcer | Economic & Medicinal Plant Research, 6: 189. |
| Antiviral | Vlietinck, A.J. and Dommissse, R.A. eds. 1985. <i>Advances in Medicinal Plant Research</i> . Wiss. Verlag. Stuttgart. |
| Autotoxic | |

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|-----------------------------------|---|
| CNS-Active | Wichtl, M. 1984. Teedrogen. Ein Handbuch für Apotheker und Ärzte. Wissenschaftliche Verlagsgesellschaft. mbH Stuttgart. 393 pp. |
| CNS-Stimulant 1/6 Caffeine | |
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Cardioprotective | |
| Chemopreventive | |
| Cholagogue | Wichtl, M. 1984. Teedrogen. Ein Handbuch für Apotheker und Ärzte. Wissenschaftliche Verlagsgesellschaft. mbH Stuttgart. 393 pp. |
| Choleretic | Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp. |
| Clastogenic | Friedman, M. and Dao, L. 1990. Effect of Autoclaving and Conventional and Microwave Baking on the Ergot Alkaloid and Chlorogenic Acid Contents of Morning Glory (<i>Ipomoea tricolor</i> Cav. cv.) Heavenly Blue Seeds. <i>J. Agric. Food Chem.</i> 38: 805-808. |
| Collagen-Sparing | |
| Diuretic | |
| Fungicide | Nigg, H.N. and Seigler, D.S., eds. 1992. Phytochemical Resources for Medicine and Agriculture. Plenum Press, New York. 445 pp. |
| Hepatoprotective | Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp. |
| Histamine-Inhibitor | |
| Hypoglycemic | |
| Immunostimulant | |
| Insectifuge | Tunon, H., Thorsell, W., and Bohlin, L. 1993. Mosquito Repelling Activity of Compounds Occurring in <i>Achillea millefolium</i> L. (Asteraceae). <i>Economic Botany</i> 48(2): 111-120, 1994. |
| Interferonogenic | <i>Economic & Medicinal Plant Research</i> , 1: 124. |
| Juvabional | Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990. |
| Larvostat | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants.</i> Taylor & Frost, London. 791 pp. |
| Leukotriene-Inhibitor | |
| Lipoxygenase-Inhibitor IC23=5 mM | Oszmianski, J. and Lee, C.Y. 1990. Inhibitory Effect of Phenolics on Carotene Bleaching in Vegetables. <i>J. Agric. Food Chem.</i> 38: 688-690. |
| Metal-Chelator | McEvily, A.J., Iyengar, R., and Gross, A.T. Inhibition of Polyphenol Oxidase by Phenolic Compounds. <i>Phenolic Compounds in Food and Their Effects on Health</i> , Ch.25. |
| NO-Genic | |
| Ornithine-Decarboxylase-Inhibitor | Hagerman, A.E. Tannin-Protein Interactions. <i>Phenolic Compounds in Food and Their Effects on Health</i> , Ch.19. |
| Oviposition-Stimulant | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants.</i> Taylor & Frost, London. 791 pp. |
| Pesticide | |
| Sunscreen | |
| Sweetener | Leung, A. Y. and Foster, S. 1995. <i>Encyclopedia of Common Natural Ingredients 2nd Ed.</i> John Wiley & Sons, New York. 649 pp. |
| Vulnerary | |

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|---------|-------|----|----|--|
| CHOLINE | Plant | -- | -- | Leung, A. Y. and Foster, S. 1995. <i>Encyclopedia of Common Natural Ingredients 2nd Ed.</i> John Wiley & Sons, New York. 649 pp. |
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Activities (20)

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|---|---|
| Antialzheimeran 5-16 g/man/day | |
| Antichoreic | Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine.</i> Avon Books, New York. 509pp. |
| Anticirrhotic 6,000 mg/man/day | |
| Anticystinuric | |
| Antidementia | |
| Antidiabetic | |
| Antidyskinetic 150-200 mg/kg/man/day | Martindale's 28th |
| Antihomocysteine | |
| Antimanic 15-30 g/man/day/orl | Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine.</i> John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antinociceptive | |
| Antisteatotic | |
| Cardiodepressant | |
| Cerebrotonic | |
| Cholinergic | Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. <i>Herbal Medicine - A Guide for Health-care Professionals.</i> The Pharmaceutical Press, London. 296pp. |
| Hepatoprotective | |
| Hypotensive | |
| Ileorelaxant | |
| Lipotropic | |
| Memorigenic | |
| Parasympathomimetic (1/1,000th acetylcholine) | Neuwinger, H. D. 1996. <i>African Ethnobotany - Poisons and Drugs.</i> Chapman & Hall, New York. 941 pp. |

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|------------------|-------|----|----|--|
| CRATAEGOLIC-ACID | Plant | -- | -- | Leung, A. Y. and Foster, S. 1995. <i>Encyclopedia of Common Natural Ingredients 2nd Ed.</i> John Wiley & Sons, New York. 649 pp. |
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|----------------|-------|----|----|--|
| DIMETHYL-AMINE | Plant | -- | -- | Leung, A. Y. and Foster, S. 1995. <i>Encyclopedia of Common Natural Ingredients 2nd Ed.</i> John Wiley & Sons, New York. 649 pp. |
|----------------|-------|----|----|--|

| Activities (2) | | | | | |
|----------------|--|--------------------|--|--|--|
| Coleoptophile | | Merck 11th Edition | | | |
| Pesticide | | | | | |

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|----------------|---------------|----|----|--|---|
| DIMETHYL-AMINE | Inflorescence | -- | -- | | * |
|----------------|---------------|----|----|--|---|

| Activities (2) | | | | | |
|----------------|--|--------------------|--|--|--|
| Coleoptophile | | Merck 11th Edition | | | |
| Pesticide | | | | | |

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|--------------|-------|----|----|--|---|
| DOCOSAN-1-OL | Shoot | -- | -- | | * |
|--------------|-------|----|----|--|---|

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|--------------|-------|----|----|--|---|
| EICOSAN-1-OL | Shoot | -- | -- | | * |
|--------------|-------|----|----|--|---|

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

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|--------------|---------------|----|----|--|---|
| ETHANOLAMINE | Inflorescence | -- | -- | | * |
|--------------|---------------|----|----|--|---|

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|-------------|-------|----|----|--|---|
| ETHYL-AMINE | Plant | -- | -- | | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp. |
|-------------|-------|----|----|--|---|

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| ETHYL-AMINE | Inflorescence | -- | -- | | * |
|-------------|---------------|----|----|--|---|

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|------------|-------|---------|---------|-------|---|
| FLAVONOIDS | Shoot | 10000.0 | 20000.0 | -0.48 | Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp. |
|------------|-------|---------|---------|-------|---|

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|------------|---------------|----|---------|--|---|
| FLAVONOIDS | Inflorescence | -- | 30500.0 | | * |
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|-----------|---------------|----|----|--|---|
| GLOGOSIDE | Inflorescence | -- | -- | | * |
|-----------|---------------|----|----|--|---|

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

| Activities (1) | | | | | |
|--|--|--|--|--|--|
| Essential Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. | | | | | |

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|-----------------|-------|----|----|--|---|
| HEPTACOSAN-1-OL | Shoot | -- | -- | | * |
|-----------------|-------|----|----|--|---|

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|----------------|-------|----|----|--|---|
| HEXACOSAN-1-OL | Shoot | -- | -- | | * |
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|------------|-------|----|----|--|---|
| HYPEROSIDE | Shoot | -- | -- | | * |
|------------|-------|----|----|--|---|

Activities (30)

| | |
|--|--|
| Aldose-Reductase-Inhibitor | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Analgesic | |
| Antiaging | |
| Antibacterial MIC=250-500 ug/ml | Planta Medica, 57: A43, 1991. |
| Anticancer | |
| Anticapillary-Fragility | Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp. |
| Antidermatitic | |
| Antielastase IC50=0.15 ug/ml | |
| Antiflu | Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980. |
| Antihepatotoxic | Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp. |
| Antiinflammatory 1/4 indomethacin | Planta Medica, 57: A131, 1991. |
| Antiischemic | |
| Antinociceptive | |
| Antioxidant IC50=4.6 uM | |
| Antiradicular | |
| Antitussive | |
| Antiviral | |
| Antiwrinkle | |
| Calcium-Antagonist | |
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Capillarifortificant | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Capillarigenic | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| 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 | |
| Hepatoprotective IC80=30 ug/ml | Mayumi Ito (nee Someya), et al. 1990. Hepatoprotective Compounds from Canarium album and Euphorbia nematocarpa. Chem. Pharm. Bull. 38(8): 2201-2203, 1990. |
| Hypotensive ivn dog | |
| Pesticide | |
| Tissue-Thromboplastin-Inhibitor IC50=20.8 uM | |
| Xanthine-Oxidase-Inhibitor | |
| cAMP-Inhibitor IC50=0.14 mg/ml | Schussler, M., Fricke, U., Nikolov, N., and Holzl, J. 1991. Comparison of the Flavonoids Occurring in Crataegus species and Inhibition of 3',5'-Cyclic Adenosine Monophosphate Phosphodiesterase. Plant Medica 57: Suppl Issue 2. p.A-133. |

HYPEROSIDE

Flower

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Activities (30)

| | |
|--|--|
| Aldose-Reductase-Inhibitor | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Analgesic | |
| Antiaging | |
| Antibacterial MIC=250-500 ug/ml | Planta Medica, 57: A43, 1991. |
| Anticancer | |
| Anticapillary-Fragility | Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp. |
| Antidermatitic | |
| Antielastase IC50=0.15 ug/ml | |
| Antiflu | Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980. |
| Antihepatotoxic | Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp. |
| Antiinflammatory 1/4 indomethacin | Planta Medica, 57: A131, 1991. |
| Antiischemic | |
| Antinociceptive | |
| Antioxidant IC50=4.6 uM | |
| Antiradicular | |
| Antitussive | |
| Antiviral | |
| Antiwrinkle | |
| Calcium-Antagonist | |
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Capillarifortificant | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Capillarigenic | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| 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 | |
| Hepatoprotective IC80=30 ug/ml | Mayumi Ito (nee Someya), et al. 1990. Hepatoprotective Compounds from Canarium album and Euphorbia nematocarpa. Chem. Pharm. Bull. 38(8): 2201-2203, 1990. |
| Hypotensive ivn dog | |
| Pesticide | |
| Tissue-Thromboplastin-Inhibitor IC50=20.8 uM | |
| Xanthine-Oxidase-Inhibitor | |
| cAMP-Inhibitor IC50=0.14 mg/ml | Schussler, M., Fricke, U., Nikolov, N., and Holzl, J. 1991. Comparison of the Flavonoids Occurring in Crataegus species and Inhibition of 3',5'-Cyclic Adenosine Monophosphate Phosphodiesterase. Plant Medica 57: Suppl Issue 2. p.A-133. |

HYPEROSIDE Leaf -- 2000.0 -0.35 *

Activities (30)

| | |
|--|--|
| Aldose-Reductase-Inhibitor | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Analgesic | |
| Antiaging | |
| Antibacterial MIC=250-500 ug/ml | Planta Medica, 57: A43, 1991. |
| Anticancer | |
| Anticapillary-Fragility | Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp. |
| Antidermatitic | |
| Antielastase IC50=0.15 ug/ml | |
| Antiflu | Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980. |
| Antihepatotoxic | Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp. |
| Antiinflammatory 1/4 indomethacin | Planta Medica, 57: A131, 1991. |
| Antiischemic | |
| Antinociceptive | |
| Antioxidant IC50=4.6 uM | |
| Antiradicular | |
| Antitussive | |
| Antiviral | |
| Antiwrinkle | |
| Calcium-Antagonist | |
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Capillarifortificant | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Capillarigenic | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| 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 | |
| Hepatoprotective IC80=30 ug/ml | Mayumi Ito (nee Someya), et al. 1990. Hepatoprotective Compounds from Canarium album and Euphorbia nematocypha. Chem. Pharm. Bull. 38(8): 2201-2203, 1990. |
| Hypotensive ivn dog | |
| Pesticide | |
| Tissue-Thromboplastin-Inhibitor IC50=20.8 uM | |
| Xanthine-Oxidase-Inhibitor | |
| cAMP-Inhibitor IC50=0.14 mg/ml | Schussler, M., Fricke, U., Nikolov, N., and Holzl, J. 1991. Comparison of the Flavonoids Occurring in Crataegus species and Inhibition of 3',5'-Cyclic Adenosine Monophosphate Phosphodiesterase. Plant Medica 57: Suppl Issue 2. p.A-133. |

HYPEROSIDE

Plant

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10000.0 -0.71

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Activities (30)

| | |
|--|--|
| Aldose-Reductase-Inhibitor | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Analgesic | |
| Antiaging | |
| Antibacterial MIC=250-500 ug/ml | Planta Medica, 57: A43, 1991. |
| Anticancer | |
| Anticapillary-Fragility | Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp. |
| Antidermatitic | |
| Antielastase IC50=0.15 ug/ml | |
| Antiflu | Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980. |
| Antihepatotoxic | Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp. |
| Antiinflammatory 1/4 indomethacin | Planta Medica, 57: A131, 1991. |
| Antiischemic | |
| Antinociceptive | |
| Antioxidant IC50=4.6 uM | |
| Antiradicular | |
| Antitussive | |
| Antiviral | |
| Antiwrinkle | |
| Calcium-Antagonist | |
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Capillarifortificant | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Capillarigenic | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| 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 | |
| Hepatoprotective IC80=30 ug/ml | Mayumi Ito (nee Someya), et al. 1990. Hepatoprotective Compounds from Canarium album and Euphorbia nematocarpa. Chem. Pharm. Bull. 38(8): 2201-2203, 1990. |
| Hypotensive ivn dog | |
| Pesticide | |
| Tissue-Thromboplastin-Inhibitor IC50=20.8 uM | |
| Xanthine-Oxidase-Inhibitor | |
| cAMP-Inhibitor IC50=0.14 mg/ml | Schussler, M., Fricke, U., Nikolov, N., and Holzl, J. 1991. Comparison of the Flavonoids Occurring in Crataegus species and Inhibition of 3',5'-Cyclic Adenosine Monophosphate Phosphodiesterase. Plant Medica 57: Suppl Issue 2. p.A-133. |

HYPEROSIDE

Inflorescence -- --

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Activities (30)

| | |
|--|--|
| Aldose-Reductase-Inhibitor | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Analgesic | |
| Antiaging | |
| Antibacterial MIC=250-500 ug/ml | Planta Medica, 57: A43, 1991. |
| Anticancer | |
| Anticapillary-Fragility | Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp. |
| Antidermatitic | |
| Antielastase IC50=0.15 ug/ml | |
| Antiflu | Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980. |
| Antihepatotoxic | Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp. |
| Antiinflammatory 1/4 indomethacin | Planta Medica, 57: A131, 1991. |
| Antiischemic | |
| Antinociceptive | |
| Antioxidant IC50=4.6 uM | |
| Antiradicular | |
| Antitussive | |
| Antiviral | |
| Antiwrinkle | |
| Calcium-Antagonist | |
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Capillarifortificant | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Capillarigenic | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| 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 | |
| Hepatoprotective IC80=30 ug/ml | Mayumi Ito (nee Someya), et al. 1990. Hepatoprotective Compounds from Canarium album and Euphorbia nematocypha. Chem. Pharm. Bull. 38(8): 2201-2203, 1990. |
| Hypotensive ivn dog | |
| Pesticide | |
| Tissue-Thromboplastin-Inhibitor IC50=20.8 uM | |
| Xanthine-Oxidase-Inhibitor | |
| cAMP-Inhibitor IC50=0.14 mg/ml | Schussler, M., Fricke, U., Nikolov, N., and Holzl, J. 1991. Comparison of the Flavonoids Occurring in Crataegus species and Inhibition of 3',5'-Cyclic Adenosine Monophosphate Phosphodiesterase. Plant Medica 57: Suppl Issue 2. p.A-133. |

| | | | | |
|----------------|---------------|----|----|---|
| ISOAMYL-AMINE | Inflorescence | -- | -- | * |
| ISOAMYL-AMINE | Plant | -- | -- | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| ISOBUTYL-AMINE | Plant | -- | -- | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| ISOORIENTIN | Leaf | -- | -- | * |

Activities (4)

| | |
|-----------------------------------|--|
| Antioxidant | |
| Antiperoxidant | Planta Medica, 57: A110, 1991. |
| Larvostat IC50=2.6-3.5 mM/kg diet | Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology, v. 4, Oryx Press, Phoenix, 1989, 267pp. |
| Pesticide | |

| | | | | |
|---------------|------|----|----|---|
| ISOQUERCITRIN | Leaf | -- | -- | * |
|---------------|------|----|----|---|

Activities (22)

ACE-Inhibitor ID50=300 ug/ml rat (24 hr.)

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

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

Anticancer

Antielastase IC50=0.7 ug/ml

Antifeedant Russell, G. B., Phytochemical resources for crop protection, N. Z. J. Technol., 2, 1986, 127-134.

Antiinflammatory

Antinociceptive

Antioxidant 1/4 quercetin

Antioxidant IC50=9.0 uM

Antiradicular 1/4 quercetin

Antitumor

Antitumor-Promoter

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

Capillarigenic

Diaphoretic

Diuretic 10 ppm List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Hypotensive Uchida, U., Ohta, H., Niwa, M., Mori, A., Nonaka, G-i., Nishioka, I., and Zaki, M. 1989. Prolongation of Life Span of Stroke-Prone Spontaneously Hypertensive Rats (SHRSP) Ingesting Persimmon Tannin. Chem. Pharm. Bull. 38(4): 1049-1052, 1990.

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

Pesticide

TNF-alpha-Inhibitor

Topoisomerase-II-Inhibitor 550 ug/ml Bernard, F. X., Sable, S., Cameron, B., Provost, J., Desnottes, J. F., Crouzet, J., Blanche, F. 1997. Glycosylated Flavones as Selective Inhibitors of Topoisomerase IV. Antimicrobial Agents & Chemotherapy, 41: 992-998.

ISOSCHAFTOSIDE Flower -- -- *

ISOSCHAFTOSIDE Leaf -- 10.0 -1.0 *

ISOVITEXIN Leaf -- -- *

Activities (4)

ACE-Inhibitor IC50=0.28 mM/l

Antioxidant #NAME?

Antioxidant >BHA Nigg, H.N. and Seigler, D.S., eds. 1992. Phytochemical Resources for Medicine and Agriculture. Plenum Press, New York. 445 pp.

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

ISOVITEXIN Inflorescence -- -- *

Activities (4)

ACE-Inhibitor IC50=0.28 mM/l

Antioxidant #NAME?

Antioxidant >BHA Nigg, H.N. and Seigler, D.S., eds. 1992. Phytochemical Resources for Medicine and Agriculture. Plenum Press, New York. 445 pp.

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

KAEMPFEROL Leaf -- -- *

Activities (75)

11B-HSD-Inhibitor

5-Lipoxygenase-Inhibitor IC50 (uM)=20

Aldose-Reductase-Inhibitor 100 uM Oliveira, T. T., Nagem, T. J., Miranda, L. C. G., Paula, V. F., Teixeira, M. A. 1997. Inhibitory Action on Aldose Reductase by Soybean Flavonoids. J Braz Chem Soc, 8(3): 211-213.

Antiaflatoxin IC50=8.73 uM

Antiaflatoxin IC50=3.28 ppm

Antiaggregant 30 uM

Antiallergic

Antibacterial 20 ug/ml

Anticancer

Antifertility 250 mg/kg/day/60 days/orl rat Kumar, P., Dixit*, V.P., and Khanna, P. Antifertility Studies of Kaempferol: Isolation and Identification from Tissue Culture of some Medicinally Important Plant Species. Plantas medicinales et phytotherapie, 23: 193-201, 1989.

Antingivitic 20 ug/ml

| | |
|--|--|
| Antiherpetic 23-92 ug/ml | Amoros, M., Simoes, C.M.O., Girre, L., et al. Synergistic Effect Of Flavones And Flavonols Against Herpes Simplex Virus Type 1 In Cell Culture. Comparison With The Antiviral Activity Of Propolis. J. of Natural Products 55(12):1732-1740, 1992. |
| Antihistaminic | Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989. |
| Antiimplantation | |
| Antiinflammatory 20 mg/kg | |
| Antiinflammatory 200 mg/kg ipr rat | |
| Antileukemic IC50=3.1 ug/ml | Life Sciences 55: 1061. |
| Antilymphocytic | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Antimutagenic ID50=10-40 nM | Phenolic Compounds in Food and Their Effects on Health. Antioxidants & Cancer Prevention. Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. ACS Symposium Series 507.ACS, Washington 402 pp. |
| Antioxidant IC50=40 uM | |
| Antioxidant 3/4 quercetin | |
| Antioxidant IC50=1.2 ug/ml | |
| Antiperiodontic 20 ug/ml | |
| Antiplaque 20 ug/ml | |
| Antiradicular 7 x quercetin | |
| Antiseptic 20 ug/ml | |
| Antiserotonin 200 mg/kg ipr rat | |
| Antispasmodic | Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989. |
| Antistaphylococcic | |
| Antitumor | |
| Antitumor-Promoter | Yasukawa, K., Takido, M., Takeuchi, M., Sato, Y., Nitta, K., and Nakagawa, S. 1989. Inhibitory Effects of Flavonol Glycosides on 12-O-Tetradecanoylphorbol-13-acetate-Induced Tumor Promotion. Chem. Pharm. Bull. 38(3): 774-776, 1990. |
| Antiulcer 50-200 mg/kg ipr rat | |
| Antiviral 23-92 ug/ml | |
| Apoptotic 60 uM | |
| Aromatase-Inhibitor IC12=1 uM/l | Journal of Medicinal Food 2: 235.1999. |
| COX-2-Inhibitor | |
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Carcinogenic | Hutchings, A, Scott, AH, Lewis, G, and Cunningham, A. 1996. Zulu Medicinal Plants. An inventory. University of Natal Press, Pietermaritzburg. 450 pp. |
| Choleretic | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| Copper-Chelator | |
| Cyclooxygenase-Inhibitor IC50 (uM) =20 | |
| Cytotoxic | |
| Diaphoretic? | Lawrence Review of Natural Products, Dec-90. |
| Diuretic | |
| Estrogenic EC50=0.1-25 uM/l | Journal of Medicinal Food 2: 227.1999. |
| Estrogenic EC50=0.56 uM | |
| Fungicide 20 ug/ml | Father Nature's Farmacy: The aggregate of all these three-letter citations. |
| HIV-RT-Inhibitor IC50=50-150 ug/ml | Garcia, J., Morin,* C., Nyasse, B., Sondengam, B-L., Tchouankeu, J-C., and Tsamo, E. Complete Structural Assignments Of An Ergosterol Derivative From Entandrophragma utile. Journal of Natural Products, 54(1): 136-142, 1991. |
| Hepatoprotective IC50=5.46 uM | |
| Hepatoprotective IC50=1.30 ppm | |
| Hypotensive | |
| ICAM-1-Inhibitor | |
| Inotropic | |
| Iodothyronine-Deiodinase-Inhibitor | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| JNK-Inhibitor | |
| Lipoxygenase-Inhibitor | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| MAO-Inhibitor | |
| Mutagenic | |
| NO-Inhibitor IC50=13.9 uM | |
| Natriuretic | |
| Neuroprotective | |
| PAF-Inhibitor | |
| Pesticide | |
| Protisticide | Meckes, M., Calzada, F., Tapia-Contreras, A., Cedillo-Rivera, R. 1999. Antiprotozoal Properties of Helianthemum glomeratum. Phytotherapy Research, 13(2): 102-105. |

| | |
|---|---|
| Quinone-Reductase-Inducer 3 uM | |
| TNF-alpha-Inhibitor IC50=3.99 uM | |
| Teratologic | |
| Topoisomerase-I-Inhibitor | Santti, R., Makela, S., Strauss, L., Korman, J., Kostian, M. L. 1998. Phytoestrogens: Potential Endocrine Disruptors in Males. <i>Toxicol Ind Health</i> , 14: 223-237. |
| Topoisomerase-II-Inhibitor IC50=8.1 ug/ml | Constantinou, A., Mehta, R., Runyan, C., Rao, K., Vaughan, A., Moon, R. 1995. Flavonoids as DNA Topoisomerase Antagonists and Poisons: Structure-Activity Relationships. <i>J Natural Products</i> , 58: 217-225. |
| Tyrosinase-Inhibitor ID50=230 uM | |
| Uterotrophic EC50=0.1-25 uM/l | Journal of Medicinal Food 2: 227.1999. |
| Vasodilator | |
| cAMP-Phosphodiesterase-Inhibitor | |
| iNOS-Inhibitor IC50=<15 uM | |
| iNOS-Inhibitor IC50=13.9 uM | |

KAEMPFEROL Flower -- -- *

Activities (75)

| | |
|---|---|
| 11B-HSD-Inhibitor | |
| 5-Lipoxygenase-Inhibitor IC50 (uM)=20 | |
| Aldose-Reductase-Inhibitor 100 uM | Oliveira, T. T., Nagem, T. J., Miranda, L. C. G., Paula, V. F., Teixeira, M. A. 1997. Inhibitory Action on Aldose Reductase by Soybean Flavonoids. <i>J Braz Chem Soc</i> , 8(3): 211-213. |
| Antiaflatoxin IC50=8.73 uM | |
| Antiaflatoxin IC50=3.28 ppm | |
| Antiaggregant 30 uM | |
| Antiallergic | |
| Antibacterial 20 ug/ml | |
| Anticancer | |
| Antifertility 250 mg/kg/day/60 days/orl rat | Kumar, P., Dixit*, V.P., and Khanna, P. Antifertility Studies of Kaempferol: Isolation and Identification from Tissue Culture of some Medicinally Important Plant Species. <i>Plantes medicinales et phytotherapie</i> , 23: 193-201, 1989. |
| Antingingivitic 20 ug/ml | |
| Antiherpetic 23-92 ug/ml | Amoros, M., Simoes, C.M.O., Girre, L., et al. Synergistic Effect Of Flavones And Flavonols Against Herpes Simplex Virus Type 1 In Cell Culture. Comparison With The Antiviral Activity Of Propolis. <i>J. of Natural Products</i> 55(12):1732-1740, 1992. |
| Antihistaminic | Williamson, E. M. and Evans, F. J., <i>Potter's New Cyclopaedia of Botanical Drugs and Preparations</i> , Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989. |
| Antiimplantation | |
| Antiinflammatory 20 mg/kg | |
| Antiinflammatory 200 mg/kg ipr rat | |
| Antileukemic IC50=3.1 ug/ml | Life Sciences 55: 1061. |
| Antilymphocytic | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp. |
| Antimutagenic ID50=10-40 nM | Phenolic Compounds in Food and Their Effects on Health. <i>Antioxidants & Cancer Prevention</i> . Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. ACS Symposium Series 507.ACS, Washington 402 pp. |
| Antioxidant IC50=40 uM | |
| Antioxidant 3/4 quercetin | |
| Antioxidant IC50=1.2 ug/ml | |
| Antiperiodontic 20 ug/ml | |
| Anti plaque 20 ug/ml | |
| Antiradicular 7 x quercetin | |
| Antiseptic 20 ug/ml | |
| Antiserotonin 200 mg/kg ipr rat | |
| Antispasmodic | Williamson, E. M. and Evans, F. J., <i>Potter's New Cyclopaedia of Botanical Drugs and Preparations</i> , Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989. |
| Antistaphylococcic | |
| Antitumor | |
| Antitumor-Promoter | Yasukawa, K., Takido, M., Takeuchi, M., Sato, Y., Nitta, K., and Nakagawa, S. 1989. Inhibitory Effects of Flavonol Glycosides on 12-O-Tetradecanoylphorbol-13-acetate-Induced Tumor Promotion. <i>Chem. Pharm. Bull.</i> 38(3): 774-776, 1990. |
| Antiulcer 50-200 mg/kg ipr rat | |
| Antiviral 23-92 ug/ml | |
| Apoptotic 60 uM | |
| Aromatase-Inhibitor IC12=1 uM/l | Journal of Medicinal Food 2: 235.1999. |
| COX-2-Inhibitor | |

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|---|---|
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Carcinogenic | Hutchings, A, Scott, AH, Lewis, G, and Cunningham, A. 1996. Zulu Medicinal Plants. An inventory. University of Natal Press, Pietermaritzburg. 450 pp. |
| Choleretic | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| Copper-Chelator | |
| Cyclooxygenase-Inhibitor IC50 (uM) =20 | |
| Cytotoxic | |
| Diaphoretic? | Lawrence Review of Natural Products, Dec-90. |
| Diuretic | |
| Estrogenic EC50=0.1-25 uM/l | Journal of Medicinal Food 2: 227.1999. |
| Estrogenic EC50=0.56 uM | |
| Fungicide 20 ug/ml | Father Nature's Farmacy: The aggregate of all these three-letter citations. |
| HIV-RT-Inhibitor IC50=50-150 ug/ml | Garcia, J., Morin,* C., Nyasse, B., Sondengam, B-L., Tchouankeu, J-C., and Tsamo, E. Complete Structural Assignments Of An Ergosterol Derivative From Entandrophragma utile. Journal of Natural Products, 54(1): 136-142, 1991. |
| Hepatoprotective IC50=5.46 uM | |
| Hepatoprotective IC50=1.30 ppm | |
| Hypotensive | |
| ICAM-1-Inhibitor | |
| Inotropic | |
| Iodothyronine-Deiodinase-Inhibitor | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| JNK-Inhibitor | |
| Lipoxygenase-Inhibitor | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| MAO-Inhibitor | |
| Mutagenic | |
| NO-Inhibitor IC50=13.9 uM | |
| Natriuretic | |
| Neuroprotective | |
| PAF-Inhibitor | |
| Pesticide | |
| Protisticide | Meckes, M., Calzada, F., Tapia-Contreras, A., Cedillo-Rivera, R. 1999. Antiprotozoal Properties of Helianthemum glomeratum. Phytotherapy Research, 13(2): 102-105. |
| Quinone-Reductase-Inducer 3 uM | |
| TNF-alpha-Inhibitor IC50=3.99 uM | |
| Teratologic | |
| Topoisomerase-I-Inhibitor | Santti, R., Makela, S., Strauss, L., Korman, J., Kostian, M. L. 1998. Phytoestrogens: Potential Endocrine Disruptors in Males. Toxicol Ind Health, 14: 223-237. |
| Topoisomerase-II-Inhibitor IC50=8.1 ug/ml | Constantinou, A., Mehta, R., Runyan, C., Rao, K., Vaughan, A., Moon, R. 1995. Flavonoids as DNA Topoisomerase Antagonists and Poisons: Structure-Activity Relationships. J Natural Products, 58: 217-225. |
| Tyrosinase-Inhibitor ID50=230 uM | |
| Uterotrophic EC50=0.1-25 uM/l | Journal of Medicinal Food 2: 227.1999. |
| Vasodilator | |
| cAMP-Phosphodiesterase-Inhibitor | |
| iNOS-Inhibitor IC50=<15 uM | |
| iNOS-Inhibitor IC50=13.9 uM | |

KAEMPFEROL

Inflorescence -- -- *

Activities (75)

| | |
|---|---|
| 11B-HSD-Inhibitor | |
| 5-Lipoxygenase-Inhibitor IC50 (uM)=20 | |
| Aldose-Reductase-Inhibitor 100 uM | Oliveira, T. T., Nagem, T. J., Miranda, L. C. G., Paula, V. F., Teixeira, M. A. 1997. Inhibitory Action on Aldose Reductase by Soybean Flavonoids. J Braz Chem Soc, 8(3): 211-213. |
| Antiaflatoxin IC50=8.73 uM | |
| Antiaflatoxin IC50=3.28 ppm | |
| Antiaggregant 30 uM | |
| Antiallergic | |
| Antibacterial 20 ug/ml | |
| Anticancer | |
| Antifertility 250 mg/kg/day/60 days/orl rat | Kumar, P., Dixit*, V.P., and Khanna, P. Antifertility Studies of Kaempferol: Isolation and Identification from Tissue Culture of some Medicinally Important Plant Species. Plantes medicinales et phytotherapie, 23: 193-201, 1989. |

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|--|---|
| Antigingivitic 20 ug/ml | |
| Antiherpetic 23-92 ug/ml | Amoros, M., Simoes, C.M.O., Girre, L., et al. Synergistic Effect Of Flavones And Flavonols Against Herpes Simplex Virus Type 1 In Cell Culture. Comparison With The Antiviral Activity Of Propolis. <i>J. of Natural Products</i> 55(12):1732-1740, 1992. |
| Antihistaminic | Williamson, E. M. and Evans, F. J., <i>Potter's New Cyclopaedia of Botanical Drugs and Preparations</i> , Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989. |
| Antiimplantation | |
| Antiinflammatory 20 mg/kg | |
| Antiinflammatory 200 mg/kg ipr rat | |
| Antileukemic IC50=3.1 ug/ml | <i>Life Sciences</i> 55: 1061. |
| Antilymphocytic | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp. |
| Antimutagenic ID50=10-40 nM | Phenolic Compounds in Food and Their Effects on Health. Antioxidants & Cancer Prevention. Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. ACS Symposium Series 507.ACS, Washington 402 pp. |
| Antioxidant IC50=40 uM | |
| Antioxidant 3/4 quercetin | |
| Antioxidant IC50=1.2 ug/ml | |
| Antiperiodontic 20 ug/ml | |
| Antiplaque 20 ug/ml | |
| Antiradicular 7 x quercetin | |
| Antiseptic 20 ug/ml | |
| Antiserotonin 200 mg/kg ipr rat | |
| Antispasmodic | Williamson, E. M. and Evans, F. J., <i>Potter's New Cyclopaedia of Botanical Drugs and Preparations</i> , Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989. |
| Antistaphylococccic | |
| Antitumor | |
| Antitumor-Promoter | Yasukawa, K., Takido, M., Takeuchi, M., Sato, Y., Nitta, K., and Nakagawa, S. 1989. Inhibitory Effects of Flavonol Glycosides on 12-O-Tetradecanoylphorbol-13-acetate-Induced Tumor Promotion. <i>Chem. Pharm. Bull.</i> 38(3): 774-776, 1990. |
| Antiulcer 50-200 mg/kg ipr rat | |
| Antiviral 23-92 ug/ml | |
| Apoptotic 60 uM | |
| Aromatase-Inhibitor IC12=1 uM/l | <i>Journal of Medicinal Food</i> 2: 235.1999. |
| COX-2-Inhibitor | |
| Cancer-Preventive | Stitt, P. A. <i>Why George Should Eat Broccoli</i> . Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Carcinogenic | Hutchings, A, Scott, AH, Lewis, G, and Cunningham, A. 1996. <i>Zulu Medicinal Plants. An inventory</i> . University of Natal Press, Pietermaritzburg. 450 pp. |
| Choleretic | Leung, A. Y. and Foster, S. 1995. <i>Encyclopedia of Common Natural Ingredients</i> 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| Copper-Chelator | |
| Cyclooxygenase-Inhibitor IC50 (uM) =20 | |
| Cytotoxic | |
| Diaphoretic? | <i>Lawrence Review of Natural Products</i> , Dec-90. |
| Diuretic | |
| Estrogenic EC50=0.1-25 uM/l | <i>Journal of Medicinal Food</i> 2: 227.1999. |
| Estrogenic EC50=0.56 uM | |
| Fungicide 20 ug/ml | Father Nature's Farmacy: The aggregate of all these three-letter citations. |
| HIV-RT-Inhibitor IC50=50-150 ug/ml | Garcia, J., Morin,* C., Nyasse, B., Sondengam, B-L., Tchouankeu, J-C., and Tsamo, E. Complete Structural Assignments Of An Ergosterol Derivative From <i>Entandrophragma utile</i> . <i>Journal of Natural Products</i> , 54(1): 136-142, 1991. |
| Hepatoprotective IC50=5.46 uM | |
| Hepatoprotective IC50=1.30 ppm | |
| Hypotensive | |
| ICAM-1-Inhibitor | |
| Inotropic | |
| Iodothyronine-Deiodinase-Inhibitor | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp. |
| JNK-Inhibitor | |
| Lipoxygenase-Inhibitor | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp. |
| MAO-Inhibitor | |
| Mutagenic | |
| NO-Inhibitor IC50=13.9 uM | |
| Natriuretic | |
| Neuroprotective | |
| PAF-Inhibitor | |
| Pesticide | |

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|---|---|
| Protisticide | Meckes, M., Calzada, F., Tapia-Contreras, A., Cedillo-Rivera, R. 1999. Antiprotozoal Properties of Helianthemum glomeratum. <i>Phytotherapy Research</i> , 13(2): 102-105. |
| Quinone-Reductase-Inducer 3 uM | |
| TNF-alpha-Inhibitor IC50=3.99 uM | |
| Teratologic | |
| Topoisomerase-I-Inhibitor | Santti, R., Makela, S., Strauss, L., Korman, J., Kostian, M. L. 1998. Phytoestrogens: Potential Endocrine Disruptors in Males. <i>Toxicol Ind Health</i> , 14: 223-237. |
| Topoisomerase-II-Inhibitor IC50=8.1 ug/ml | Constantinou, A., Mehta, R., Runyan, C., Rao, K., Vaughan, A., Moon, R. 1995. Flavonoids as DNA Topoisomerase Antagonists and Poisons: Structure-Activity Relationships. <i>J Natural Products</i> , 58: 217-225. |
| Tyrosinase-Inhibitor ID50=230 uM | |
| Uterotrophic EC50=0.1-25 uM/l | <i>Journal of Medicinal Food</i> 2: 227.1999. |
| Vasodilator | |
| cAMP-Phosphodiesterase-Inhibitor | |
| iNOS-Inhibitor IC50=<15 uM | |
| iNOS-Inhibitor IC50=13.9 uM | |

KAEMPFEROL=3=NEOHESPERIDOSIDE Flower -- 1800.0 *

Activities (1)

| | |
|--------------------------------------|---|
| Aldose-Reductase-Inhibitor IC30=10uM | 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. <i>Phytochemistry</i> , 23: 1885-1888. |
|--------------------------------------|---|

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

Activities (78)

| | |
|---|--|
| Aldose-Reductase-Inhibitor EC=3 ppm | Shin*, K.H., Chung, M.S., Chae, Y.J., Yoon, K.Y., Cho, T.S. 1992. A survey for aldose reductase inhibition of herbal medicines. <i>Fitoterapia</i> 64(2): 130, 1993. |
| Aldose-Reductase-Inhibitor IC50=0.45 uM rat | |
| AntiHIV | |
| Antiallergic | |
| Antiangiogenic IC60-75=10 uM | |
| Antiatherogenic | |
| Antibacterial MIC=500 ug/ml | <i>Planta Medica</i> , 57: A43, 1991. |
| Anticarcinogenic | |
| 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. |
| Anticataract EC=3 ppm | Shin*, K.H., Chung, M.S., Chae, Y.J., Yoon, K.Y., Cho, T.S. 1992. A survey for aldose reductase inhibition of herbal medicines. <i>Fitoterapia</i> 64(2): 130, 1993. |
| Anticomplementary | |
| Antidermatic | Bisset, N.G., ed. 1994. <i>Herbal Drugs and Phytopharmaceuticals</i> . CRC Press. Boca Raton, FL. 566 pp. |
| Antiestrogenic | |
| Antifeedant IC52=<1,000 ppm diet | Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, <i>Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology</i> , v. 4, Oryx Press, Phoenix, 1989, 267pp. |
| Antiherpetic 11-23 ug/ml | |
| Antihistaminic <10-15 uM | |
| Antiinflammatory #NAME? | Wichtl, M. 1984. <i>Teedrogen. Ein Handbuch fur Apotheker und Arzte</i> . Wissenschaftliche Verlagsgesellschaft. mbH Stuttgart. 393 pp. |
| Antileukemic 20-50 uM | |
| Antilymphomic | 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. |
| Antimelanomic | 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. |
| Antimutagenic ID50=2-5 nM | |
| Antimutagenic ID50=0.44 ug/ml | |
| Antinociceptive | |
| Antioxidant IC50=10 uM | |
| Antipolio | <i>Economic & Medicinal Plant Research</i> , 5: 197. |
| Antiproliferant | |
| Antispasmodic | Williamson, E. M. and Evans, F. J., <i>Potter's New Cyclopaedia of Botanical Drugs and Preparations</i> , Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989. |
| Antitumor 1-50 uM | |
| 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. |

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| 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. Am J Chin Med, 31(1):37-46. |
| Antitumor (Ovary) | 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. |
| 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. Am J Chin Med, 31(1):37-46. |
| Antitumor (Skin) 20 uM | |
| Antitumor (Stomach) | 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. |
| Antitumor (Thyroid) 12-50 uM | |
| Antitumor (brain) | 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. |
| Antitussive | |
| Antiviral 11-23 ug/ml | |
| Aphidifuge | |
| Apoptotic 12-50 uM | |
| Aromatase-Inhibitor IC35=1 uM/l | Journal of Medicinal Food 2: 235.1999. |
| Beta-Glucuronidase-Inhibitor IC50=40 uM | |
| Calcium-Antagonist IC50=1.2 uM rbt | |
| Cancer-Preventive | |
| Chemopreventive | |
| Choleretic | |
| Cytotoxic 1-50 uM | |
| Deiodinase-Inhibitor | Jim Duke's personal files. |
| Differentiator IC>40=40 uM | |
| Diuretic | Jim Duke's personal files. |
| Estrogenic 58% genistein | |
| Hepatoprotective | |
| Hyaluronidase-Inhibitor IC50+=100-250 uM | |
| Hypocholesterolemic | |
| ICAM-1-Inhibitor | |
| IKK-Inhibitor | |
| Iodothyronine-Deiodinase-Inhibitor | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Lipoxygenase-Inhibitor | |
| MAPK-Inhibitor | |
| MMP-9-Inhibitor 20 uM | |
| Metalloproteinase-Inhibitor | |
| Myorelaxant | |
| NEP-Inhibitor IC50=>42 uM | |
| NF-kB-Inhibitor | |
| NO-Inhibitor | |
| PTK-Inhibitor 10-100 uM | |
| Pesticide | |
| Proliferant | |
| Prostaglandin-Synthetase-Inhibitor | |
| Protein-Kinase-C-Inhibitor IC70=50 uM | |
| Succinoxidase-Inhibitor | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| TNF-alpha-Inhibitor IC50=14.44 uM | |
| Topoisomerase-I-Inhibitor | Santti, R., Makela, S., Strauss, L., Korman, J., Kostian, M. L. 1998. Phytoestrogens: Potential Endocrine Disruptors in Males. Toxicol Ind Health, 14: 223-237. |
| VEGF-Inhibitor IC50=2-7 uM | |
| Vasodilator | |
| Xanthine-Oxidase-Inhibitor IC50=0.11 ug/ml | Chem. & Pharm. Bull. 38: 1772. |
| iNOS-Inhibitor | |

LUTEOLIN

Tissue -- -- *

Culture

Activities (78)

Aldose-Reductase-Inhibitor EC=3 ppm Shin*, K.H., Chung, M.S., Chae, Y.J., Yoon, K.Y., Cho, T.S. 1992. A survey for aldose reductase inhibition of herbal medicines. Fitoterapia 64(2): 130, 1993.

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|---|--|
| Aldose-Reductase-Inhibitor IC50=0.45 uM rat | |
| AntiHIV | |
| Antiallergic | |
| Antiangiogenic IC60-75=10 uM | |
| Antiatherogenic | |
| Antibacterial MIC=500 ug/ml | Planta Medica, 57: A43, 1991. |
| Anticarcinogenic | |
| Anticarcinomic | 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. |
| Anticataract EC=3 ppm | Shin*, K.H., Chung, M.S., Chae, Y.J., Yoon, K.Y., Cho, T.S. 1992. A survey for aldose reductase inhibition of herbal medicines. Fitoterapia 64(2): 130, 1993. |
| Anticomplementary | |
| Antidermatic | Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp. |
| Antiestrogenic | |
| Antifeedant IC52=<1,000 ppm diet | Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology, v. 4, Oryx Press, Phoenix, 1989, 267pp. |
| Antiherpetic 11-23 ug/ml | |
| Antihistaminic <10-15 uM | |
| Antiinflammatory #NAME? | Wichtl, M. 1984. Teedrogen. Ein Handbuch fur Apotheker und Arzte. Wissenschaftliche Verlagsgesellschaft. mbH Stuttgart. 393 pp. |
| Antileukemic 20-50 uM | |
| Antilymphomic | 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. |
| Antimelanomic | 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. |
| Antimutagenic ID50=2-5 nM | |
| Antimutagenic ID50=0.44 ug/ml | |
| Antinociceptive | |
| Antioxidant IC50=10 uM | |
| Antipolio | Economic & Medicinal Plant Research, 5: 197. |
| Antiproliferant | |
| Antispasmodic | Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989. |
| Antitumor 1-50 uM | |
| 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. Am J Chin Med, 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. Am J Chin Med, 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. Am J Chin Med, 31(1):37-46. |
| Antitumor (Ovary) | 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. |
| 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. Am J Chin Med, 31(1):37-46. |
| Antitumor (Skin) 20 uM | |
| Antitumor (Stomach) | 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. |
| Antitumor (Thyroid) 12-50 uM | |
| Antitumor (brain) | 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. |
| Antitussive | |
| Antiviral 11-23 ug/ml | |
| Aphidifuge | |
| Apoptotic 12-50 uM | |
| Aromatase-Inhibitor IC35=1 uM/l | Journal of Medicinal Food 2: 235.1999. |
| Beta-Glucuronidase-Inhibitor IC50=-40 uM | |
| Calcium-Antagonist IC50=1.2 uM fbt | |
| Cancer-Preventive | |
| Chemopreventive | |
| Choleretic | |
| Cytotoxic 1-50 uM | |
| Deiodinase-Inhibitor | Jim Duke's personal files. |
| Differentiator IC>40=40 uM | |
| Diuretic | Jim Duke's personal files. |
| Estrogenic 58% genistein | |
| Hepatoprotective | |
| Hyaluronidase-Inhibitor IC50+=100-250 uM | |
| Hypocholesterolemic | |

ICAM-1-Inhibitor
 IKK-Inhibitor
 Iodothyronine-Deiodinase-Inhibitor Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
 Lipoxygenase-Inhibitor
 MAPK-Inhibitor
 MMP-9-Inhibitor 20 uM
 Metalloproteinase-Inhibitor
 Myorelaxant
 NEP-Inhibitor IC50=>42 uM
 NF-kB-Inhibitor
 NO-Inhibitor
 PTK-Inhibitor 10-100 uM
 Pesticide
 Proliferant
 Prostaglandin-Synthetase-Inhibitor
 Protein-Kinase-C-Inhibitor IC70=50 uM
 Succinoxidase-Inhibitor Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
 TNF-alpha-Inhibitor IC50=14.44 uM
 Topoisomerase-I-Inhibitor Santti, R., Makela, S., Strauss, L., Korman, J., Kostian, M. L. 1998. Phytoestrogens: Potential Endocrine Disruptors in Males. Toxicol Ind Health, 14: 223-237.
 VEGF-Inhibitor IC50=2-7 uM
 Vasodilator
 Xanthine-Oxidase-Inhibitor IC50=0.11 ug/ml Chem. & Pharm. Bull. 38: 1772.
 iNOS-Inhibitor

MASLINIC-ACID Inflorescence -- -- *

Activities (6)

AntiHIV IC100=18 ug/ml
 Antiedemic
 Antihistaminic
 Antiinflammatory Chem & Pharm. Bull., 34: 2164, 1986.
 Antiviral IC100=18 ug/ml
 Protease-Inhibitor IC100=18 ug/ml

N-1-N-5-N-10-TRI-TRANS-4-COUMAROYL-SPERMIDINE Flower -- -- *

NEOISOSCHAFTOSIDE Leaf -- -- *

NEOSCHAFTOSIDE Leaf -- 0.5 *

Activities (1)

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

NEOSCHAFTOSIDE Flower -- -- *

Activities (1)

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

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

NONACOSAN-1-OL Shoot -- -- *

NONADECAN-1-OL Shoot -- -- *

O-METHOXY-PHENYLETHYLAMINE Plant -- -- Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.

OCTACOSAN-1-OL Shoot -- -- *

OCTADECAN-1-OL Shoot -- -- *

OLEANOLIC-ACID Inflorescence -- -- *

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. Am J Chin Med, 31(1):37-46. |
| Anticariogenic | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 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. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 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. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin. |
| Antiedemic IC36=40 mg/kg ipr rat | |
| Antifertility | |
| Antingingivitic 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 Uncaria tomentosa. Journal of Natural Products, 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. Am J Chin Med, 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. Biochemistry International 28(4): 735-744, 1992. |
| Antioxidant IC46=10 uM | |
| Antiperiodontic MIC=625-1,250 ug/ml | |
| Antiperoxidant IC30=200 ug/ml | |
| Antiplaque MIC=625-1,250 ug/ml | |
| Antiplasmodial IC50=70-89 ug/ml | |
| Antisarcomic | |
| 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. Am J Chin Med, 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. Am J Chin Med, 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. Am J Chin Med, 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. Am J Chin Med, 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. Am J Chin Med, 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. J. Nat. Prod., 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. J. Nat. Prod., 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 Plantago major, a Selective Inhibitor of Cyclooxygenase-2 Catalyzed Prostaglandin Biosynthesis. J. Nat. Prod., 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. Encyclopedia of Common Natural Ingredients 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

OLEANOLIC-ACID

Plant

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

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. Am J Chin Med, 31(1):37-46.

Anticariogenic

Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 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. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 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. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 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 Uncaria tomentosa. Journal of Natural Products, 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. Am J Chin Med, 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. Biochemistry International 28(4): 735-744, 1992.

Antioxidant IC46=10 uM

Antiperiodontic MIC=625-1,250 ug/ml

Antiperoxidant IC30=200 ug/ml

Antiplaque MIC=625-1,250 ug/ml

Antiplasmodial IC50=70-89 ug/ml

Antisarcomic

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. Am J Chin Med, 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. Am J Chin Med, 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. Am J Chin Med, 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. <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. |
| Antiviral IC50=21.8 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. |
| 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. <i>Why George Should Eat Broccoli</i> . 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 | <i>Advance in Chinese Medicinal Materials Research</i> . 1985. Eds. H. M. Chang, H. W. Yeung, W. -W. Tso and A. Koo. World Scientific Publishing Co., Philadelphia Pa., page 211. |
| Hypolipemic | |
| Hypotensive | |
| Immunomodulator | |
| Leucocytogenic | |
| NF-kB-Inhibitor | |
| Phagocytotic | |
| Piscicide | ANON. 1948-1976. <i>The Wealth of India raw materials</i> . Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| Prostaglandin-Synthesis-Inhibitor i _{gs} mus | |
| Sedative | |
| Uterotonic | |
| Vasopressor | |

OPC Shoot 10000.0 30000.0 Bisset, N.G., ed. 1994. *Herbal Drugs and Phytopharmaceuticals*. CRC Press. Boca Raton, FL. 566 pp.

Activities (25)

| |
|--|
| AntiHIV |
| Antiallergic |
| Antianaphylactic |
| Antiasthmatic |
| Antiatherogenic |
| Antibacterial |
| Antibiotic |
| Antiedemic 2 x phenylbutazone |
| Antierhythmic |
| Antiexudative |
| Antigastritic |
| Antihistaminic |
| Antiinflammatory |
| Antiobesity |
| Antioxidant |
| Antiradicular |
| Antiviral |
| Cancer-Preventive |
| Capillaritonic |
| Hyaluronidase-Inhibitor |
| Immunomodulator |
| Lipolytic |
| Pesticide |
| Sunscreen |
| Xanthine-Oxidase-Inhibitor IC50=>40 |
| Hatano, T., Yasuhara, T., Yoshihara, R., Agata, I., Noro, T., and Okuda, T. 1989. Effects of Interaction of Tannins with Co-existing Substances.VII. Inhibitory Effects of Tannins Related Polyphenols on Xanthine Oxidase. <i>Chem. Pharm. Bull.</i> 38(5): 1224-1229 |

ORIENTIN

Leaf

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| | | | | |
|---|----------|----|----|---|
| PROCYANIDIN | Leaf | -- | -- | * |
| Activities (11) | | | | |
| AntiHIV | | | | |
| Antiallergic | | | | |
| Antibacterial | | | | |
| Antibiotic | | | | |
| Antiedemic | | | | |
| Antiexudative | | | | |
| Antiviral | | | | |
| Capillariprotective | | | | |
| Hyaluronidase-Inhibitor | | | | |
| Pesticide | | | | |
| Xanthine-Oxidase-Inhibitor IC50=>40 | | | | |
| Hatano, T., Yasuhara, T., Yoshihara, R., Agata, I., Noro, T., and Okuda, T. 1989. Effects of Interaction of Tannins with Co-existing Substances.VII. Inhibitory Effects of Tannins Related Polyphenols on Xanthine Oxidase. Chem. Pharm. Bull. 38(5): 1224-1229 | | | | |
| PROCYANIDIN-B-1 | Pericarp | -- | -- | * |
| Activities (1) | | | | |
| ACE-Inhibitor 0.33 mg/ml (58.2% inhibition) | | | | |
| PROCYANIDIN-B-1 | Leaf | -- | -- | * |
| Activities (1) | | | | |
| ACE-Inhibitor 0.33 mg/ml (58.2% inhibition) | | | | |
| PROCYANIDIN-B-2 | Pericarp | -- | -- | * |
| Activities (1) | | | | |
| Beta-Adrenergic Receptor Blocker 10 uM | | | | |
| Zhu, M., Phillipson, J. D., Greengrass, P. M., Bowery, N. E., Cai, Y. 1997. Plant Polyphenols: Biologically Active Compounds or Non-Selective Binders to Protein? Phytochemistry, 44(3): 441-447. | | | | |
| PROCYANIDIN-B-2 | Leaf | -- | -- | * |
| Activities (1) | | | | |
| Beta-Adrenergic Receptor Blocker 10 uM | | | | |
| Zhu, M., Phillipson, J. D., Greengrass, P. M., Bowery, N. E., Cai, Y. 1997. Plant Polyphenols: Biologically Active Compounds or Non-Selective Binders to Protein? Phytochemistry, 44(3): 441-447. | | | | |
| PROCYANIDIN-B-4 | Pericarp | -- | -- | * |
| Activities (4) | | | | |
| Antidermatitic | | | | |
| Antigastrotic | | | | |
| Beta-Adrenergic Receptor Blocker 10 uM | | | | |
| Vulnerary | | | | |
| Zhu, M., Phillipson, J. D., Greengrass, P. M., Bowery, N. E., Cai, Y. 1997. Plant Polyphenols: Biologically Active Compounds or Non-Selective Binders to Protein? Phytochemistry, 44(3): 441-447. | | | | |
| PROCYANIDIN-B-4 | Leaf | -- | -- | * |
| Activities (4) | | | | |
| Antidermatitic | | | | |
| Antigastrotic | | | | |
| Beta-Adrenergic Receptor Blocker 10 uM | | | | |
| Vulnerary | | | | |
| Zhu, M., Phillipson, J. D., Greengrass, P. M., Bowery, N. E., Cai, Y. 1997. Plant Polyphenols: Biologically Active Compounds or Non-Selective Binders to Protein? Phytochemistry, 44(3): 441-447. | | | | |
| PROCYANIDIN-B-5 | Pericarp | -- | -- | * |
| PROCYANIDIN-B-5 | Leaf | -- | -- | * |
| PROCYANIDIN-C-1 | Pericarp | -- | -- | * |
| PROCYANIDIN-C-1 | Leaf | -- | -- | * |
| PROCYANIDIN-D-1 | Pericarp | -- | -- | * |
| PROCYANIDIN-D-1 | Leaf | -- | -- | * |
| PROCYANIDIN-E | Pericarp | -- | -- | * |
| PROCYANIDIN-E | Leaf | -- | -- | * |

| | | | | |
|---------------|----------|---------|---------|---|
| PROCYANIDIN-G | Pericarp | -- | -- | * |
| PROCYANIDIN-G | Leaf | -- | -- | * |
| PYCNOGENOL | Shoot | 10000.0 | 30000.0 | Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp. |

Activities (6)

ACE-Inhibitor IC50=35 ug/ml hm

ACE-Inhibitor 32 mg/kg ivn rat

Antioxidant

Antiradicular

Cancer-Preventive

Immunostimulant

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

Activities (176)

11B-HSD-Inhibitor

5-Lipoxygenase-Inhibitor
IC50 (uM)=4

ATPase-Inhibitor Nigg, H.N. and Seigler, D.S., eds. 1992. Phytochemical Resources for Medicine and Agriculture. Plenum Press, New York. 445 pp.

Aldehyde-Oxidase-Inhibitor IC70-96=10 uM

Aldose-Reductase-Inhibitor 100 uM

Aldose-Reductase-Inhibitor IC50=0.84 ug/ml cow Ichikawa, K., et al. 1991. Isolation and Structure Determination of Aldose Reductase Inhibitors from Traditional Thai Medicine, and Syntheses of Their Derivatives. Sankyo Kenkyusho Nempo, 43: 99-110.

Aldose-Reductase-Inhibitor IC50=0.84 ug/ml cow Okada, Y. et al. 1995. Search for Naturally Occurring Substances to Prevent the Complications of Diabetes. II. Inhibitory Effect of Coumarin and Flavonoid Derivatives on Bovine Lens Aldose Reductase and Rabbit Platelet Aggregation. Chem Pharm Bull 43(8):1385-1387

Aldose-Reductase-Inhibitor IC50=0.344 uM Mao, X. M., Zhang, J. Q. 1993. Inhibition of Aldose Reductase by Extracts of Chinese Herbal Medicine. Zhongguo Zhongyao Zazhi, 18(10): 623-624.

Allelochemic IC82=1 mM Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology, v. 4, Oryx Press, Phoenix, 1989, 267pp.

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

Analgesic

AntiCrohn's 400 mg/man/3x/day Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).

AntiGTF ID50=120 ug/ml

AntiHIV

AntiPMS 500 mg/2x/day/wmn Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).

Antiaflatoxin IC50=25 uM

Antiaflatoxin IC50=7.5 ppm

Antiaggregant IC50=55 uM Economic & Medicinal Plant Research, 5: 333.

Antiaggregant 30 uM

Antiaging

Antiallergic IC50=14 uM Jim Duke's personal files.

Antialzheimeran

Antianaphylactic Meli, R., Autore, G., Di Carlo, G., Capasso, F. Inhibitory Action of Quercetin on Intestinal Transit in Mice. Phytotherapy Research 4(5): 201, 1990.

Antiangiogenic

Antiarthritic

Antiasthmatic IC50=14 uM

Antiatherosclerotic

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

Anticarcinomic (Breast) IC50=1.5 uM Medline (post 1990 searches filed in my computer)

Anticariogenic ID50=120 ug/ml

Anticataract

Anticolitic 400 mg/man/3x/day Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).

Anticomplementary

Anticystitic 1,000 mg/day/4 weeks

Antidepressant

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

Antidiabetic

Antielastase IC50=0.8 ug/ml

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| Antiencephalic | Economic & Medicinal Plant Research, 5: 199. |
| Antiescherichic | |
| Antiestrogenic | |
| Antifeedant IC52=<1,000 ppm diet | Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology, v. 4, Oryx Press, Phoenix, 1989, 267pp. |
| Antifibrosarcomic | |
| Antiflu | Vlietinck, A.J. and Dommissie, R.A. eds. 1985. Advances in Medicinal Plant Research. Wiss. Verlag. Stuttgart. |
| Antigastric | Rastitel'nye Resursy, 21: 85. |
| Antigonadotropic | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Antihepatotoxic | Joyeux, M., Rolland, A., Fleurentin, J., Mortier, F., and Dorfman, P. 1989. Tert-Butyl Hydroperoxide-Induced Injury in Isolated Rat Hepatocytes: A Model for Studying Anti-Hepatotoxic Crude Drugs. Planta Medica 56(2): 171-173, 1990. |
| Antihyperic 48-150 ug/ml | |
| Antihistaminic IC50=<10 uM | |
| Antihydrophobic | Vlietinck, A.J. and Dommissie, R.A. eds. 1985. Advances in Medicinal Plant Research. Wiss. Verlag. Stuttgart. |
| Antihypertensive | Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp. |
| Antiinflammatory 20-150 mg/kg | Fitoterapia No.5-1990. |
| Antileishmanic IC50=64 | |
| Antileukemic IC50=10 uM | Economic & Medicinal Plant Research, 5: 225. |
| Antileukemic IC50=>10 ug/ml | Life Sciences 55: 1061. |
| Antileukemic 5.5-60 uM | |
| Antileukotriene | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antilipoperoxidant IC67=50 | |
| Antimalarial IC50=1-6.4 ug/ml | Medicinal and Poisonous Plants of the Tropics. Leeuwenberg, A.J.M., ed. Pudoc, Wageningen. 1987. |
| Antimelanomic | |
| Antimetastatic | |
| Antimutagenic ID50=2-5 nM | Phenolic Compounds in Food and Their Effects on Health. Antioxidants & Cancer Prevention. Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. ACS Symposium Series 507.ACS, Washington 402 pp. |
| Antimutagenic ID50=0.62 ug/ml | |
| Antimyocarditic | Economic & Medicinal Plant Research, 5: 199. |
| Antinitrosaminic | |
| Antinociceptive | |
| Antioxidant IC96=300 ppm | Phenolic Compounds in Food and Their Effects on Health. Antioxidants & Cancer Prevention. Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. ACS Symposium Series 507.ACS, Washington 402 pp. |
| Antioxidant ED50=2.3 uM | Seidel, V., Verholle, M., Malard, Y., Tilleguin, F., Fruchart, J-C., Duriez, P., Bailleul, F., Teissier, E. 2000. Phenylpropanoids from Ballota nigra L. Inhibit in vitro LDL Peroxidation. Phytotherapy Research, 14(2): 93-98. |
| Antioxidant 4.7 x Vit. E | |
| Antioxidant IC47=10 uM | |
| Antipancreatic | Joseph, J., Nadeau, D. and Underwood, A. 2001. The Color Code. Hyperion, NY. |
| Antiperiodontal | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiperistaltic | |
| Antipermeability | |
| Antiperoxidant | Planta Medica, 57: A110, 1991. |
| Antipharyngitic | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiplaque | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiplasmodial IC50=13-64 | |
| Antipodriac | |
| Antipolio | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiproliferant 10 nM | |
| Antiprostanoic | |
| Antiprostatic | Joseph, J., Nadeau, D. and Underwood, A. 2001. The Color Code. Hyperion, NY. |
| Antipsoriac | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiradicular IC50=4.6 uM | Planta Medica, 56(6): 695, 1990. |
| Antispasmodic | |
| Antistreptococcic ID50=120 ug/ml | |
| Antithiamin | Phenolic Compounds in Food and Their Effects on Health, 69. |
| Antithrombic | |
| Antitrypanosomic IC50=13 | |
| Antitumor 10 uM | |
| Antitumor (Bladder) | |
| Antitumor (Breast) | |
| Antitumor (Colon) | |
| Antitumor (Lung) | |

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| Antitumor (Ovary) | |
| Antitumor (Skin) 20 uM | |
| Antitumor-Promoter | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiulcer | |
| Antiviral IC50=10 uM | Economic & Medicinal Plant Research, 5: 225. |
| Antiviral 48-150 ug/ml | Amoros, M., Simoes, C.M.O., Girre, L., et al. Synergistic Effect Of Flavones And Flavonols Against Herpes Simplex Virus Type 1 In Cell Culture. Comparison With The Antiviral Activity Of Propolis. J. of Natural Products 55(12):1732-1740, 1992. |
| Apoptotic 20-60 uM | |
| Bacteristat 10 mg/ml | |
| Bradycardiac | Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp. |
| COMT-Inhibitor | |
| COX-2-Inhibitor <40 uM | |
| Calmodulin-Antagonist | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Candidicide | |
| Capillariprotective | Merck 11th Edition |
| Carcinogenic 40,000 ppm (diet) mus | Nigg, H.N. and Seigler, D.S., eds. 1992. Phytochemical Resources for Medicine and Agriculture. Plenum Press, New York. 445 pp. |
| Catabolic | |
| Copper-Chelator | |
| Cyclooxygenase-Inhibitor | |
| Cytochrome-P450-1A2-Inhibitor | |
| Cytotoxic ED50=70 ug/ml | Matsukawa, Y., et al. The Effect of Quercetin and Other Flavonoids on Cell Cycle Progression and Growth of Human Gastric Cancer Cells. Planta Medica, 56(6): 677, 1990. |
| Cytotoxic IC82=100 ug/ml | Planta Medica, 57: A113, 1991. |
| Deiodinase-Inhibitor | Jim Duke's personal files. |
| Diaphoretic? | Lawrence Review of Natural Products, Dec-90. |
| Differentiator 5.5 uM | |
| Estrogenic 10% genistein | |
| Fungicide | |
| Glucosyl-Transferase-Inhibitor ID50=120 ug/ml | |
| HIV-RT-Inhibitor IC50=<1 ug/ml | Nakane, H., Fukushima, M., and Ono*, K. Differential Inhibition Of Reverse Transcriptase And Various DNA Polymerases By Digallic Acid And Its Derivatives. Journal of Natural Products, 53(5): 1234-1240, 1990. |
| Hemostat | Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp. |
| Hepatomagenic 5,000 ppm (diet) rat | Phenolic Compounds in Food and Their Effects on Health. Antioxidants & Cancer Prevention. Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. ACS Symposium Series 507.ACS, Washington 402 pp. |
| Hepatoprotective | |
| Hypoglycemic 100 mg/kg orl rat | Ivorra, M.D., Paya, M., and Villar, A. 1989. A Review of Natural Products and Plants as Potential Antidiabetic Drugs. Journal of Ethnopharmacology, 27: 243-275, 1989. |
| Inotropic | |
| Insulinogenic | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Juvabional | Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology, v. 4, Oryx Press, Phoenix, 1989, 267pp. |
| Larvostat 8,000 ppm diet | Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology, v. 4, Oryx Press, Phoenix, 1989, 267pp. |
| Lipoxygenase-Inhibitor IC11=1.25 mM | Oszmianski, J. and Lee, C.Y. 1990. Inhibitory Effect of Phenolics on Carotene Bleaching in Vegetables. J. Agric. Food Chem. 38: 688-690. |
| Lipoxygenase-Inhibitor IC50=0.1-5 uM | |
| MAO-A-Inhibitor | |
| MMP-9-Inhibitor 20 uM | |
| Mast-Cell-Stabilizer | |
| Metal-Chelator (Copper) | Seidel, V., Verholle, M., Malard, Y., Tillequin, F., Fruchart, J-C., Duriez, P., Bailleul, F., Teissier, E. 2000. Phenylpropanoids from Ballota nigra L. Inhibit in vitro LDL Peroxidation. Phytotherapy Research, 14(2): 93-98. |
| Metalloproteinase-Inhibitor IC50=>42 uM | |
| Mutagenic | |
| NADH-Oxidase-Inhibitor | |
| NEP-Inhibitor IC50=>42 uM | |
| NF-kB-Inhibitor | |
| NO-Inhibitor IC>50=125 uM | |
| NO-Inhibitor IC50=20 uM | |
| NO-Synthase-Inhibitor 5-50 uM | |
| Neuroprotective 5-25 uM | |
| Ornithine-Decarboxylase-Inhibitor <10 uM | |
| P450-Inducer 5 uM | Father Nature's Pharmacy: The aggregate of all these three-letter citations. |
| P450-Inhibitor 50-100 uM | Father Nature's Pharmacy: The aggregate of all these three-letter citations. |
| PGE2-Inhibitor | |
| PTK-Inhibitor 0.4-24 uM | |

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| Pesticide | |
| Phospholipase-Inhibitor | |
| Plasmodicide | Neuwinger, H. D. 1996. African Ethnobotany - Poisons and Drugs. Chapman & Hall, New York. 941 pp. |
| Proliferant | |
| Prostaglandin-Synthesis-Inhibitor 40 ug/ml | Ibewuik, J. C., Ogungbamila, F. O., Ogundaini, A. O., Okeke, I. N., Bohlin, L. 1997. Antiinflammatory and Antibacterial Activities of C-methylflavonol from <i>Piliostigma thonningii</i> . <i>Phytotherapy Research</i> , 11(4): 281-284. |
| Protein-Kinase-C-Inhibitor | Naim, M., Zehavi, U., Nagy, S., and Rouseff, R.L. Hydroxycinnamic Acids as Off-Flavor Precursors in Citrus Fruits and Their Products. <i>Phenolic Compounds in Food and Their Effects on Health</i> , Ch.14. |
| Quinone-Reductase-Inducer 6 uM | Uda, Y., Price, K. R., Williamson, G., Rhodes, M. J. C. 1997. Induction of the Anticarcinogenic Marker Enzyme, Quinone Reductase, in Murine Hepatoma Cells In Vitro by Flavonoids. <i>Cancer Lett.</i> , 120 (2): 213-216. |
| Quinone-Reductase-Inducer 13 uM | |
| TNF-alpha-Inhibitor IC50=3.11 uM | |
| Teratologic | |
| Topoisomerase-I-Inhibitor IC50=12.8 ug/ml | |
| Topoisomerase-I-Inhibitor IC50=42 uM | |
| Topoisomerase-II-Inhibitor IC50=1-6.9 ug/ml | |
| Topoisomerase-II-Inhibitor IC50=23-40 uM | |
| Tumorigenic 0.1% diet orl rat/yr | Jim Duke's personal files. |
| Tyrosinase-Inhibitor ID50=70 uM | |
| Tyrosine-Kinase-Inhibitor | Economic & Medicinal Plant Research, 6: 170. |
| VEGF-Inhibitor | |
| Vasodilator | |
| Xanthine-Oxidase-Inhibitor IC50=>0.4 ug/ml | Chem. & Pharm. Bull. 38: 1772. |
| Xanthine-Oxidase-Inhibitor IC50=10.6 ug/ml | |
| Xanthine-Oxidase-Inhibitor 3.1 uM | |
| cAMP-Phosphodiesterase-Inhibitor | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| iNOS-Inhibitor IC50=20 uM | |

QUERCETIN Flower -- -- *

Activities (176)

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| 11B-HSD-Inhibitor | |
| 5-Lipoxygenase-Inhibitor IC50 (uM)=4 | |
| ATPase-Inhibitor | Nigg, H.N. and Seigler, D.S., eds. 1992. <i>Phytochemical Resources for Medicine and Agriculture</i> . Plenum Press, New York. 445 pp. |
| Aldehyde-Oxidase-Inhibitor IC70-96=10 uM | |
| Aldose-Reductase-Inhibitor 100 uM | |
| Aldose-Reductase-Inhibitor 4 ug/ml | Ichikawa, K., et al. 1991. Isolation and Structure Determination of Aldose Reductase Inhibitors from Traditional Thai Medicine, and Syntheses of Their Derivatives. <i>Sankyo Kenkyusho Nempo</i> , 43: 99-110. |
| Aldose-Reductase-Inhibitor IC50=0.84 ug/ml cow | Okada, Y. et al. 1995. Search for Naturally Occurring Substances to Prevent the Complications of Diabetes. II. Inhibitory Effect of Coumarin and Flavonoid Derivatives on Bovine Lens Aldose Reductase and Rabbit Platelet Aggregation. <i>Chem Pharm Bull</i> 43(8):1385-1387 |
| Aldose-Reductase-Inhibitor IC50=0.344 uM | Mao, X. M., Zhang, J. Q. 1993. Inhibition of Aldose Reductase by Extracts of Chinese Herbal Medicine. <i>Zhongguo Zhongyao Zazhi</i> , 18(10): 623-624. |
| Allelochemic IC82=1 mM | Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, <i>Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology</i> , v. 4, Oryx Press, Phoenix, 1989, 267pp. |
| Allergenic | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp. |
| Analgesic | |
| AntiCrohn's 400 mg/man/3x/day | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| AntiGTF ID50=120 ug/ml | |
| AntiHIV | |
| AntiPMS 500 mg/2x/day/wmn | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiaflatoxin IC50=25 uM | |
| Antiaflatoxin IC50=7.5 ppm | |
| Antiaggregant IC50=55 uM | Economic & Medicinal Plant Research, 5: 333. |
| Antiaggregant 30 uM | |
| Antiaging | |
| Antiallergic IC50=14 uM | Jim Duke's personal files. |

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| Antialzheimeran | |
| Antianaphylactic | Meli, R., Autore, G., Di Carlo, G., Capasso, F. Inhibitory Action of Quercetin on Intestinal Transit in Mice. <i>Phytotherapy Research</i> 4(5): 201, 1990. |
| Antiangiogenic | |
| Antiarthritic | |
| Antiasthmatic IC50=14 uM | |
| Antiatherosclerotic | |
| Antibacterial | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants.</i> Taylor & Frost, London. 791 pp. |
| Anticarcinomic (Breast) IC50=1.5 uM | Medline (post 1990 searches filed in my computer) |
| Anticariogenic ID50=120 ug/ml | |
| Anticataract | |
| Anticolitic 400 mg/man/3x/day | Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine.</i> John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Anticomplementary | |
| Anticystitic 1,000 mg/day/4 weeks | |
| Antidepressant | |
| Antidermatitic | Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine.</i> John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antidiabetic | |
| Antielastase IC50=0.8 ug/ml | |
| Antiencephalitic | Economic & Medicinal Plant Research, 5: 199. |
| Antiescherichic | |
| Antiestrogenic | |
| Antifeedant IC52=<1,000 ppm diet | Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, <i>Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology</i> , v. 4, Oryx Press, Phoenix, 1989, 267pp. |
| Antifibrosarcomic | |
| Antiflu | Vlietinck, A.J. and Dommissie, R.A. eds. 1985. <i>Advances in Medicinal Plant Research.</i> Wiss. Verlag. Stuttgart. |
| Antigastric | Rastitel'nye Resursy, 21: 85. |
| Antigonadotropic | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants.</i> Taylor & Frost, London. 791 pp. |
| Antihepatotoxic | Joyeux, M., Rolland, A., Fleurentin, J., Mortier, F., and Dorfman, P. 1989. Tert-Butyl Hydroperoxide-Induced Injury in Isolated Rat Hepatocytes: A Model for Studying Anti-Hepatotoxic Crude Drugs. <i>Planta Medica</i> 56(2): 171-173, 1990. |
| Antiherpetic 48-150 ug/ml | |
| Antihistaminic IC50=<10 uM | |
| Antihydrophobic | Vlietinck, A.J. and Dommissie, R.A. eds. 1985. <i>Advances in Medicinal Plant Research.</i> Wiss. Verlag. Stuttgart. |
| Antihypertensive | Huang, K. C. 1993. <i>The Pharmacology of Chinese Herbs.</i> CRC Press, Boca Raton, FL 388 pp. |
| Antiinflammatory 20-150 mg/kg | Fitoterapia No.5-1990. |
| Antileishmanic IC50=64 | |
| Antileukemic IC50=10 uM | Economic & Medicinal Plant Research, 5: 225. |
| Antileukemic IC50=>10 ug/ml | Life Sciences 55: 1061. |
| Antileukemic 5.5-60 uM | |
| Antileukotriene | Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine.</i> John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antilipoperoxidant IC67=50 | |
| Antimalarial IC50=1-6.4 ug/ml | Medicinal and Poisonous Plants of the Tropics. Leeuwenberg, A.J.M., ed. Pudoc, Wageningen. 1987. |
| Antimelanomic | |
| Antimetastatic | |
| Antimutagenic ID50=2-5 nM | Phenolic Compounds in Food and Their Effects on Health. Antioxidants & Cancer Prevention. Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. ACS Symposium Series 507.ACS, Washington 402 pp. |
| Antimutagenic ID50=0.62 ug/ml | |
| Antimyocarditic | Economic & Medicinal Plant Research, 5: 199. |
| Antinitrosaminic | |
| Antinociceptive | |
| Antioxidant IC96=300 ppm | Phenolic Compounds in Food and Their Effects on Health. Antioxidants & Cancer Prevention. Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. ACS Symposium Series 507.ACS, Washington 402 pp. |
| Antioxidant ED50=2.3 uM | Seidel, V., Verholle, M., Malard, Y., Tilleguin, F., Fruchart, J-C., Duriez, P., Bailleul, F., Teissier, E. 2000. Phenylpropanoids from <i>Ballota nigra</i> L. Inhibit in vitro LDL Peroxidation. <i>Phytotherapy Research</i> , 14(2): 93-98. |
| Antioxidant 4.7 x Vit. E | |
| Antioxidant IC47=10 uM | |
| Antipancreatic | Joseph, J., Nadeau, D. and Underwood, A. 2001. <i>The Color Code.</i> Hyperion, NY. |
| Antiperiodontal | Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine.</i> John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiperistaltic | |
| Antipermeability | |
| Antiperoxidant | Planta Medica, 57: A110, 1991. |
| Antipharyngitic | Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine.</i> John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiplaque | Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine.</i> John Bastyr College Publications, Seattle, Washington (Looseleaf). |

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| Antiplasmodial IC50=13-64 | |
| Antipodriac | |
| Antipolio | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiproliferant 10 nM | |
| Antiprostanoïd | |
| Antiprostatiic | Joseph, J., Nadeau, D. and Underwood, A. 2001. The Color Code. Hyperion, NY. |
| Antipsoriac | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiradicular IC50=4.6 uM | Planta Medica, 56(6): 695, 1990. |
| Antispasmodic | |
| Antistreptococccic ID50=120 ug/ml | |
| Antithiamin | Phenolic Compounds in Food and Their Effects on Health, 69. |
| Antithrombic | |
| Antitrypanosomic IC50=13 | |
| Antitumor 10 uM | |
| Antitumor (Bladder) | |
| Antitumor (Breast) | |
| Antitumor (Colon) | |
| Antitumor (Lung) | |
| Antitumor (Ovary) | |
| Antitumor (Skin) 20 uM | |
| Antitumor-Promoter | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiulcer | |
| Antiviral IC50=10 uM | Economic & Medicinal Plant Research, 5: 225. |
| Antiviral 48-150 ug/ml | Amoros, M., Simoes, C.M.O., Girre, L., et al. Synergistic Effect Of Flavones And Flavonols Against Herpes Simplex Virus Type 1 In Cell Culture. Comparison With The Antiviral Activity Of Propolis. J. of Natural Products 55(12):1732-1740, 1992. |
| Apoptotic 20-60 uM | |
| Bacteristat 10 mg/ml | |
| Bradycardiac | Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp. |
| COMT-Inhibitor | |
| COX-2-Inhibitor <40 uM | |
| Calmodulin-Antagonist | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Candidicide | |
| Capillariprotective | Merck 11th Edition |
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| Catabolic | |
| Copper-Chelator | |
| Cyclooxygenase-Inhibitor | |
| Cytochrome-P450-1A2-Inhibitor | |
| Cytotoxic ED50=70 ug/ml | Matsukawa, Y., et al. The Effect of Quercetin and Other Flavonoids on Cell Cycle Progresssion and Growth of Human Gastric Cancer Cells. Planta Medica, 56(6): 677, 1990. |
| Cytotoxic IC82=100 ug/ml | Planta Medica, 57: A113, 1991. |
| Deiodinase-Inhibitor | Jim Duke's personal files. |
| Diaphoretic? | Lawrence Review of Natural Products, Dec-90. |
| Differentiator 5.5 uM | |
| Estrogenic 10% genistein | |
| Fungicide | |
| Glucosyl-Transferase-Inhibitor ID50=120 ug/ml | |
| HIV-RT-Inhibitor IC50=<1 ug/ml | Nakane, H., Fukushima, M., and Ono*, K. Differential Inhibition Of Reverse Transcriptase And Various DNA Polymerases By Digallic Acid And Its Derivatives. Journal of Natural Products, 53(5): 1234-1240, 1990. |
| Hemostat | Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp. |
| Hepatomagenic 5,000 ppm (diet) rat | Phenolic Compounds in Food and Their Effects on Health. Antioxidants & Cancer Prevention. Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. ACS Symposium Series 507.ACS, Washington 402 pp. |
| Hepatoprotective | |
| Hypoglycemic 100 mg/kg orl rat | Ivorra, M.D., Paya, M., and Villar, A. 1989. A Review of Natural Products and Plants as Potential Antidiabetic Drugs. Journal of Ethnopharmacology, 27: 243-275, 1989. |
| Inotropic | |
| Insulinogenic | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Juvabional | Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology, v. 4, Oryx Press, Phoenix, 1989, 267pp. |
| Larvistat 8,000 ppm diet | Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology, v. 4, Oryx Press, Phoenix, 1989, 267pp. |
| Lipoxygenase-Inhibitor IC11=1.25 mM | Oszmianski, J. and Lee, C.Y. 1990. Inhibitory Effect of Phenolics on Carotene Bleaching in Vegetables. J. Agric. Food Chem. 38: 688-690. |
| Lipoxygenase-Inhibitor IC50=0.1-5 uM | |

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

QUERCETIN Leaf -- 20.0 -0.35 *

Activities (176)

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| 11B-HSD-Inhibitor | |
| 5-Lipoxygenase-Inhibitor IC50 (uM)=4 | |
| ATPase-Inhibitor | Nigg, H.N. and Seigler, D.S., eds. 1992. Phytochemical Resources for Medicine and Agriculture. Plenum Press, New York. 445 pp. |
| Aldehyde-Oxidase-Inhibitor IC70-96=10 uM | |

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| Aldose-Reductase-Inhibitor 100 uM | |
| Aldose-Reductase-Inhibitor 4 ug/ml | Ichikawa, K., et al. 1991. Isolation and Structure Determination of Aldose Reductase Inhibitors from Traditional Thai Medicine, and Syntheses of Their Derivatives. <i>Sankyo Kenkyusho Nempo</i> , 43: 99-110. |
| Aldose-Reductase-Inhibitor IC50=0.84 ug/ml cow | Okada, Y., et al. 1995. Search for Naturally Occurring Substances to Prevent the Complications of Diabetes. II. Inhibitory Effect of Coumarin and Flavonoid Derivatives on Bovine Lens Aldose Reductase and Rabbit Platelet Aggregation. <i>Chem Pharm Bull</i> 43(8):1385-1387 |
| Aldose-Reductase-Inhibitor IC50=0.344 uM | Mao, X. M., Zhang, J. Q. 1993. Inhibition of Aldose Reductase by Extracts of Chinese Herbal Medicine. <i>Zhongguo Zhongyao Zazhi</i> , 18(10): 623-624. |
| Allelochemic IC82=1 mM | Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, <i>Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology</i> , v. 4, Oryx Press, Phoenix, 1989, 267pp. |
| Allergenic | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp. |
| Analgesic | |
| AntiCrohn's 400 mg/man/3x/day | Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| AntiGTF ID50=120 ug/ml | |
| AntiHIV | |
| AntiPMS 500 mg/2x/day/wmn | Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiaflatoxin IC50=25 uM | |
| Antiaflatoxin IC50=7.5 ppm | |
| Antiaggregant IC50=55 uM | <i>Economic & Medicinal Plant Research</i> , 5: 333. |
| Antiaggregant 30 uM | |
| Antiaging | |
| Antiallergic IC50=14 uM | Jim Duke's personal files. |
| Antialzheimeran | |
| Antianaphylactic | Meli, R., Autore, G., Di Carlo, G., Capasso, F. Inhibitory Action of Quercetin on Intestinal Transit in Mice. <i>Phytotherapy Research</i> 4(5): 201, 1990. |
| Antiangiogenic | |
| Antiarthritic | |
| Antiasthmatic IC50=14 uM | |
| Antiatherosclerotic | |
| Antibacterial | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp. |
| Anticarcinomic (Breast) IC50=1.5 uM | Medline (post 1990 searches filed in my computer) |
| Anticariogenic ID50=120 ug/ml | |
| Anticataract | |
| Anticolitic 400 mg/man/3x/day | Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Anticomplementary | |
| Anticystitic 1,000 mg/day/4 weeks | |
| Antidepressant | |
| Antidermatitic | Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antidiabetic | |
| Antielastase IC50=0.8 ug/ml | |
| Antiencephalitic | <i>Economic & Medicinal Plant Research</i> , 5: 199. |
| Antiescherichic | |
| Antiestrogenic | |
| Antifeedant IC52=<1,000 ppm diet | Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, <i>Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology</i> , v. 4, Oryx Press, Phoenix, 1989, 267pp. |
| Antifibrosarcomic | |
| Antiflu | Vlietinck, A.J. and Dommissie, R.A. eds. 1985. <i>Advances in Medicinal Plant Research</i> . Wiss. Verlag. Stuttgart. |
| Antigastric | <i>Rastitel'nye Resursy</i> , 21: 85. |
| Antigonadotropic | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp. |
| Antihepatotoxic | Joyeux, M., Rolland, A., Fleurentin, J., Mortier, F., and Dorfman, P. 1989. Tert-Butyl Hydroperoxide-Induced Injury in Isolated Rat Hepatocytes: A Model for Studying Anti-Hepatotoxic Crude Drugs. <i>Planta Medica</i> 56(2): 171-173, 1990. |
| Antiherpetic 48-150 ug/ml | |
| Antihistaminic IC50=<10 uM | |
| Antihydrophobic | Vlietinck, A.J. and Dommissie, R.A. eds. 1985. <i>Advances in Medicinal Plant Research</i> . Wiss. Verlag. Stuttgart. |
| Antihypertensive | Huang, K. C. 1993. <i>The Pharmacology of Chinese Herbs</i> . CRC Press, Boca Raton, FL 388 pp. |
| Antiinflammatory 20-150 mg/kg | <i>Fitoterapia</i> No.5-1990. |
| Antileishmanic IC50=64 uM | |
| Antileukemic IC50=10 uM | <i>Economic & Medicinal Plant Research</i> , 5: 225. |
| Antileukemic IC50=>10 ug/ml | <i>Life Sciences</i> 55: 1061. |
| Antileukemic 5.5-60 uM | |
| Antileukotriene | Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf). |

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| Antilipoperoxidant IC ₆₇ =50 | |
| Antimalarial IC ₅₀ =1-6.4 ug/ml | Medicinal and Poisonous Plants of the Tropics. Leeuwenberg, A.J.M., ed. Pudoc, Wageningen. 1987. |
| Antimelanomic | |
| Antimetastatic | |
| Antimutagenic ID ₅₀ =2-5 nM | Phenolic Compounds in Food and Their Effects on Health. Antioxidants & Cancer Prevention. Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. ACS Symposium Series 507.ACS, Washington 402 pp. |
| Antimutagenic ID ₅₀ =0.62 ug/ml | |
| Antimyocarditic | Economic & Medicinal Plant Research, 5: 199. |
| Antinitrosaminic | |
| Antinociceptive | |
| Antioxidant IC ₉₆ =300 ppm | Phenolic Compounds in Food and Their Effects on Health. Antioxidants & Cancer Prevention. Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. ACS Symposium Series 507.ACS, Washington 402 pp. |
| Antioxidant ED ₅₀ =2.3 uM | Seidel, V., Verholle, M., Malard, Y., Tilleguin, F., Fruchart, J-C., Duriez, P., Bailleul, F., Teissier, E. 2000. Phenylpropanoids from <i>Ballota nigra</i> L. Inhibit in vitro LDL Peroxidation. <i>Phytotherapy Research</i> , 14(2): 93-98. |
| Antioxidant 4.7 x Vit. E | |
| Antioxidant IC ₄₇ =10 uM | |
| Antipancreatic | Joseph, J., Nadeau, D. and Underwood, A. 2001. <i>The Color Code</i> . Hyperion, NY. |
| Antiperiodontal | Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiperistaltic | |
| Antipermeability | |
| Antiperoxidant | <i>Planta Medica</i> , 57: A110, 1991. |
| Antipharyngitic | Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiplateau | Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiplasmodial IC ₅₀ =13- 64 | |
| Antipodriac | |
| Antipolio | Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiproliferant 10 nM | |
| Antiprostanoid | |
| Antiprostatic | Joseph, J., Nadeau, D. and Underwood, A. 2001. <i>The Color Code</i> . Hyperion, NY. |
| Antipsoriac | Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiradicular IC ₅₀ =4.6 uM | <i>Planta Medica</i> , 56(6): 695, 1990. |
| Antispasmodic | |
| Antistreptococcic ID ₅₀ =120 ug/ml | |
| Antithiamin | Phenolic Compounds in Food and Their Effects on Health, 69. |
| Antithrombic | |
| Antitrypanosomic IC ₅₀ =13 | |
| Antitumor 10 uM | |
| Antitumor (Bladder) | |
| Antitumor (Breast) | |
| Antitumor (Colon) | |
| Antitumor (Lung) | |
| Antitumor (Ovary) | |
| Antitumor (Skin) 20 uM | |
| Antitumor-Promoter | Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiulcer | |
| Antiviral IC ₅₀ =10 uM | Economic & Medicinal Plant Research, 5: 225. |
| Antiviral 48-150 ug/ml | Amoros, M., Simoes, C.M.O., Girre, L., et al. Synergistic Effect Of Flavones And Flavonols Against Herpes Simplex Virus Type 1 In Cell Culture. Comparison With The Antiviral Activity Of Propolis. <i>J. of Natural Products</i> 55(12):1732-1740, 1992. |
| Apoptotic 20-60 uM | |
| Bacteristat 10 mg/ml | |
| Bradycardiac | Huang, K. C. 1993. <i>The Pharmacology of Chinese Herbs</i> . CRC Press, Boca Raton, FL 388 pp. |
| COMT-Inhibitor | |
| COX-2-Inhibitor <40 uM | |
| Calmodulin-Antagonist | Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Cancer-Preventive | Stitt, P. A. <i>Why George Should Eat Broccoli</i> . Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Candidicide | |
| Capillariprotective | Merck 11th Edition |
| Carcinogenic 40,000 ppm (diët) mus | Nigg, H.N. and Seigler, D.S., eds. 1992. <i>Phytochemical Resources for Medicine and Agriculture</i> . Plenum Press, New York. 445 pp. |
| Catabolic | |
| Copper-Chelator | |
| Cyclooxygenase-Inhibitor | |
| Cytochrome-P450-1A2- Inhibitor | |
| Cytotoxic ED ₅₀ =70 ug/ml | Matsukawa, Y., et al. The Effect of Quercetin and Other Flavonoids on Cell Cycle Progression and Growth of Human Gastric Cancer Cells. <i>Planta Medica</i> , 56(6): 677, 1990. |

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| Cytotoxic IC82=100 ug/ml | Planta Medica, 57: A113, 1991. |
| Deiodinase-Inhibitor | Jim Duke's personal files. |
| Diaphoretic? | Lawrence Review of Natural Products, Dec-90. |
| Differentiator 5.5 uM | |
| Estrogenic 10% genistein | |
| Fungicide | |
| Glucosyl-Transferase-Inhibitor ID50=120 ug/ml | |
| HIV-RT-Inhibitor IC50=<1 ug/ml | Nakane, H., Fukushima, M., and Ono*, K. Differential Inhibition Of Reverse Transcriptase And Various DNA Polymerases By Digallic Acid And Its Derivatives. Journal of Natural Products, 53(5): 1234-1240, 1990. |
| Hemostat | Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp. |
| Hepatomagenic 5,000 ppm (diet) rat | Phenolic Compounds in Food and Their Effects on Health. Antioxidants & Cancer Prevention. Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. ACS Symposium Series 507.ACS, Washington 402 pp. |
| Hepatoprotective | |
| Hypoglycemic 100 mg/kg orl rat | Ivorra, M.D., Paya, M., and Villar, A. 1989. A Review of Natural Products and Plants as Potential Antidiabetic Drugs. Journal of Ethnopharmacology, 27: 243-275, 1989. |
| Inotropic | |
| Insulinogenic | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Juvabional | Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology, v. 4, Oryx Press, Phoenix, 1989, 267pp. |
| Larvistat 8,000 ppm diet | Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology, v. 4, Oryx Press, Phoenix, 1989, 267pp. |
| Lipoxygenase-Inhibitor IC11=1.25 mM | Oszmianski, J. and Lee, C.Y. 1990. Inhibitory Effect of Phenolics on Carotene Bleaching in Vegetables. J. Agric. Food Chem. 38: 688-690. |
| Lipoxygenase-Inhibitor IC50=0.1-5 uM | |
| MAO-A-Inhibitor | |
| MMP-9-Inhibitor 20 uM | |
| Mast-Cell-Stabilizer | |
| Metal-Chelator (Copper) | Seidel, V., Verholle, M., Malard, Y., Tilleguin, F., Fruchart, J-C., Duriez, P., Bailleul, F., Teissier, E. 2000. Phenylpropanoids from <i>Ballota nigra</i> L. Inhibit in vitro LDL Peroxidation. Phytotherapy Research, 14(2): 93-98. |
| Metalloproteinase-Inhibitor IC50=>42 uM | |
| Mutagenic | |
| NADH-Oxidase-Inhibitor | |
| NEP-Inhibitor IC50=>42 uM | |
| NF-kB-Inhibitor | |
| NO-Inhibitor IC>50=125 uM | |
| NO-Inhibitor IC50=20 uM | |
| NO-Synthase-Inhibitor 5-50 uM | |
| Neuroprotective 5-25 uM | |
| Ornithine-Decarboxylase-Inhibitor <10 uM | |
| P450-Inducer 5 uM | Father Nature's Farmacy: The aggregate of all these three-letter citations. |
| P450-Inhibitor 50-100 uM | Father Nature's Farmacy: The aggregate of all these three-letter citations. |
| PGE2-Inhibitor | |
| PTK-Inhibitor 0.4-24 uM | |
| Pesticide | |
| Phospholipase-Inhibitor | |
| Plasmodicide | Neuwinger, H. D. 1996. African Ethnobotany - Poisons and Drugs. Chapman & Hall, New York. 941 pp. |
| Proliferant | |
| Prostaglandin-Synthesis-Inhibitor 40 ug/ml | Ibewuik, J. C., Ogungbamila, F. O., Ogundaini, A. O., Okeke, I. N., Bohlin, L. 1997. Antiinflammatory and Antibacterial Activities of C-methylflavonol from <i>Piliostigma thonningii</i> . Phytotherapy Research, 11(4): 281-284. |
| Protein-Kinase-C-Inhibitor | Naim, M., Zehavi, U., Nagy, S., and Rouseff, R.L. Hydroxycinnamic Acids as Off-Flavor Precursors in Citrus Fruits and Their Products. Phenolic Compounds in Food and Their Effects on Health, Ch.14. |
| Quinone-Reductase-Inducer 6 uM | Uda, Y., Price, K. R., Williamson, G., Rhodes, M. J. C. 1997. Induction of the Anticarcinogenic Marker Enzyme, Quinone Reductase, in Murine Hepatoma Cells In Vitro by Flavonoids. Cancer Lett., 120 (2): 213-216. |
| Quinone-Reductase-Inducer 13 uM | |
| TNF-alpha-Inhibitor IC50=3.11 uM | |
| Teratologic | |
| Topoisomerase-I-Inhibitor IC50=12.8 ug/ml | |
| Topoisomerase-I-Inhibitor IC50=42 uM | |
| Topoisomerase-II-Inhibitor IC50=1-6.9 ug/ml | |
| Topoisomerase-II-Inhibitor IC50=23-40 uM | |
| Tumorigenic 0.1% diet orl rat/yr | Jim Duke's personal files. |
| Tyrosinase-Inhibitor ID50=70 uM | |
| Tyrosine-Kinase-Inhibitor | Economic & Medicinal Plant Research, 6: 170. |

VEGF-Inhibitor

Vasodilator

Xanthine-Oxidase-Inhibitor IC50=>0.4 ug/ml

Chem. & Pharm. Bull. 38: 1772.

Xanthine-Oxidase-Inhibitor IC50=10.6 ug/ml

Xanthine-Oxidase-Inhibitor 3.1 uM

cAMP-Phosphodiesterase-Inhibitor

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

iNOS-Inhibitor IC50=20 uM

QUERCETIN

Inflorescence --

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Activities (176)

11B-HSD-Inhibitor

5-Lipoxygenase-Inhibitor IC50 (uM)=4

ATPase-Inhibitor

Nigg, H.N. and Seigler, D.S., eds. 1992. Phytochemical Resources for Medicine and Agriculture. Plenum Press, New York. 445 pp.

Aldehyde-Oxidase-Inhibitor IC70-96=10 uM

Aldose-Reductase-Inhibitor 100 uM

Aldose-Reductase-Inhibitor 4 ug/ml

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

Aldose-Reductase-Inhibitor IC50=0.84 ug/ml cow

Okada, Y., et al. 1995. Search for Naturally Occurring Substances to Prevent the Complications of Diabetes. II. Inhibitory Effect of Coumarin and Flavonoid Derivatives on Bovine Lens Aldose Reductase and Rabbit Platelet Aggregation. Chem Pharm Bull 43(8):1385-1387

Aldose-Reductase-Inhibitor IC50=0.344 uM

Mao, X. M., Zhang, J. Q. 1993. Inhibition of Aldose Reductase by Extracts of Chinese Herbal Medicine. Zhongguo Zhongyao Zazhi, 18(10): 623-624.

Allelochemic IC82=1 mM

Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology, v. 4, Oryx Press, Phoenix, 1989, 267pp.

Allergenic

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

Analgesic

AntiCrohn's 400 mg/man/3x/day

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

AntiGTF ID50=120 ug/ml

AntiHIV

AntiPMS 500 mg/2x/day/wmn

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

Antiaflatoxin IC50=25 uM

Antiaflatoxin IC50=7.5 ppm

Antiaggregant IC50=55 uM

Economic & Medicinal Plant Research, 5: 333.

Antiaggregant 30 uM

Antiaging

Antiallergic IC50=14 uM

Jim Duke's personal files.

Antialzheimeran

Antianaphylactic

Meli, R., Autore, G., Di Carlo, G., Capasso, F. Inhibitory Action of Quercetin on Intestinal Transit in Mice. Phytotherapy Research 4(5): 201, 1990.

Antiangiogenic

Antiarthritic

Antiasthmatic IC50=14 uM

Antiatherosclerotic

Antibacterial

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

Anticarcinomic (Breast) IC50=1.5 uM

Medline (post 1990 searches filed in my computer)

Anticariogenic ID50=120 ug/ml

Anticataract

Anticolitic 400 mg/man/3x/day

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

Anticomplementary

Anticystitic 1,000 mg/day/4 weeks

Antidepressant

Antidermatitic

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

Antidiabetic

Antielastase IC50=0.8 ug/ml

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|----------------------------------|--|
| Antiencephalic | Economic & Medicinal Plant Research, 5: 199. |
| Antiescherichic | |
| Antiestrogenic | |
| Antifeedant IC52=<1,000 ppm diet | Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology, v. 4, Oryx Press, Phoenix, 1989, 267pp. |
| Antifibrosarcomic | |
| Antiflu | Vlietinck, A.J. and Dommissie, R.A. eds. 1985. Advances in Medicinal Plant Research. Wiss. Verlag. Stuttgart. |
| Antigastric | Rastitel'nye Resursy, 21: 85. |
| Antigonadotropic | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Antihepatotoxic | Joyeux, M., Rolland, A., Fleurentin, J., Mortier, F., and Dorfman, P. 1989. Tert-Butyl Hydroperoxide-Induced Injury in Isolated Rat Hepatocytes: A Model for Studying Anti-Hepatotoxic Crude Drugs. Planta Medica 56(2): 171-173, 1990. |
| Antiherpetic 48-150 ug/ml | |
| Antihistaminic IC50=<10 uM | |
| Antihydrophobic | Vlietinck, A.J. and Dommissie, R.A. eds. 1985. Advances in Medicinal Plant Research. Wiss. Verlag. Stuttgart. |
| Antihypertensive | Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp. |
| Antiinflammatory 20-150 mg/kg | Fitoterapia No.5-1990. |
| Antileishmanic IC50=64 uM | |
| Antileukemic IC50=10 uM | Economic & Medicinal Plant Research, 5: 225. |
| Antileukemic IC50=>10 ug/ml | Life Sciences 55: 1061. |
| Antileukemic 5.5-60 uM | |
| Antileukotriene | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antilipoperoxidant IC67=50 | |
| Antimalarial IC50=1-6.4 ug/ml | Medicinal and Poisonous Plants of the Tropics. Leeuwenberg, A.J.M., ed. Pudoc, Wageningen. 1987. |
| Antimelanomic | |
| Antimetastatic | |
| Antimutagenic ID50=2-5 nM | Phenolic Compounds in Food and Their Effects on Health. Antioxidants & Cancer Prevention. Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. ACS Symposium Series 507.ACS, Washington 402 pp. |
| Antimutagenic ID50=0.62 ug/ml | |
| Antimyocarditic | Economic & Medicinal Plant Research, 5: 199. |
| Antinitrosaminic | |
| Antinociceptive | |
| Antioxidant IC96=300 ppm | Phenolic Compounds in Food and Their Effects on Health. Antioxidants & Cancer Prevention. Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. ACS Symposium Series 507.ACS, Washington 402 pp. |
| Antioxidant ED50=2.3 uM | Seidel, V., Verholle, M., Malard, Y., Tilleguin, F., Fruchart, J-C., Duriez, P., Bailleul, F., Teissier, E. 2000. Phenylpropanoids from Ballota nigra L. Inhibit in vitro LDL Peroxidation. Phytotherapy Research, 14(2): 93-98. |
| Antioxidant 4.7 x Vit. E | |
| Antioxidant IC47=10 uM | |
| Antipancreatic | Joseph, J., Nadeau, D. and Underwood, A. 2001. The Color Code. Hyperion, NY. |
| Antiperiodontal | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiperistaltic | |
| Antipermeability | |
| Antiperoxidant | Planta Medica, 57: A110, 1991. |
| Antipharyngitic | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiplateau | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiplasmodial IC50=13-64 | |
| Antipodriac | |
| Antipolio | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiproliferant 10 nM | |
| Antiprostanoide | |
| Antiprostatic | Joseph, J., Nadeau, D. and Underwood, A. 2001. The Color Code. Hyperion, NY. |
| Antipsoriac | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiradicular IC50=4.6 uM | Planta Medica, 56(6): 695, 1990. |
| Antispasmodic | |
| Antistreptococcic ID50=120 ug/ml | |
| Antithiamin | Phenolic Compounds in Food and Their Effects on Health, 69. |
| Antithrombic | |
| Antitrypanosomic IC50=13 | |
| Antitumor 10 uM | |
| Antitumor (Bladder) | |
| Antitumor (Breast) | |
| Antitumor (Colon) | |
| Antitumor (Lung) | |

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|---|--|
| Antitumor (Ovary) | |
| Antitumor (Skin) 20 uM | |
| Antitumor-Promoter | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiulcer | |
| Antiviral IC50=10 uM | Economic & Medicinal Plant Research, 5: 225. |
| Antiviral 48-150 ug/ml | Amoros, M., Simoes, C.M.O., Girre, L., et al. Synergistic Effect Of Flavones And Flavonols Against Herpes Simplex Virus Type 1 In Cell Culture. Comparison With The Antiviral Activity Of Propolis. J. of Natural Products 55(12):1732-1740, 1992. |
| Apoptotic 20-60 uM | |
| Bacteristat 10 mg/ml | |
| Bradycardiac | Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp. |
| COMT-Inhibitor | |
| COX-2-Inhibitor <40 uM | |
| Calmodulin-Antagonist | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Candidicide | |
| Capillariprotective | Merck 11th Edition |
| Carcinogenic 40,000 ppm (diet) mus | Nigg, H.N. and Seigler, D.S., eds. 1992. Phytochemical Resources for Medicine and Agriculture. Plenum Press, New York. 445 pp. |
| Catabolic | |
| Copper-Chelator | |
| Cyclooxygenase-Inhibitor | |
| Cytochrome-P450-1A2-Inhibitor | |
| Cytotoxic ED50=70 ug/ml | Matsukawa, Y., et al. The Effect of Quercetin and Other Flavonoids on Cell Cycle Progression and Growth of Human Gastric Cancer Cells. Planta Medica, 56(6): 677, 1990. |
| Cytotoxic IC82=100 ug/ml | Planta Medica, 57: A113, 1991. |
| Deiodinase-Inhibitor | Jim Duke's personal files. |
| Diaphoretic? | Lawrence Review of Natural Products, Dec-90. |
| Differentiator 5.5 uM | |
| Estrogenic 10% genistein | |
| Fungicide | |
| Glucosyl-Transferase-Inhibitor ID50=120 ug/ml | |
| HIV-RT-Inhibitor IC50=<1 ug/ml | Nakane, H., Fukushima, M., and Ono*, K. Differential Inhibition Of Reverse Transcriptase And Various DNA Polymerases By Digallic Acid And Its Derivatives. Journal of Natural Products, 53(5): 1234-1240, 1990. |
| Hemostat | Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp. |
| Hepatomagenic 5,000 ppm (diet) rat | Phenolic Compounds in Food and Their Effects on Health. Antioxidants & Cancer Prevention. Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. ACS Symposium Series 507.ACS, Washington 402 pp. |
| Hepatoprotective | |
| Hypoglycemic 100 mg/kg orl rat | Ivorra, M.D., Paya, M., and Villar, A. 1989. A Review of Natural Products and Plants as Potential Antidiabetic Drugs. Journal of Ethnopharmacology, 27: 243-275, 1989. |
| Inotropic | |
| Insulinogenic | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Juvabional | Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology, v. 4, Oryx Press, Phoenix, 1989, 267pp. |
| Larvistat 8,000 ppm diet | Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology, v. 4, Oryx Press, Phoenix, 1989, 267pp. |
| Lipoxygenase-Inhibitor IC11=1.25 mM | Oszmianski, J. and Lee, C.Y. 1990. Inhibitory Effect of Phenolics on Carotene Bleaching in Vegetables. J. Agric. Food Chem. 38: 688-690. |
| Lipoxygenase-Inhibitor IC50=0.1-5 uM | |
| MAO-A-Inhibitor | |
| MMP-9-Inhibitor 20 uM | |
| Mast-Cell-Stabilizer | |
| Metal-Chelator (Copper) | Seidel, V., Verholle, M., Malard, Y., Tilleguin, F., Fruchart, J-C., Duriez, P., Bailleul, F., Teissier, E. 2000. Phenylpropanoids from Ballota nigra L. Inhibit in vitro LDL Peroxidation. Phytotherapy Research, 14(2): 93-98. |
| Metalloproteinase-Inhibitor IC50=>42 uM | |
| Mutagenic | |
| NADH-Oxidase-Inhibitor | |
| NEP-Inhibitor IC50=>42 uM | |
| NF-kB-Inhibitor | |
| NO-Inhibitor IC>50=125 uM | |
| NO-Inhibitor IC50=20 uM | |
| NO-Synthase-Inhibitor 5-50 uM | |
| Neuroprotective 5-25 uM | |
| Ornithine-Decarboxylase-Inhibitor <10 uM | |
| P450-Inducer 5 uM | Father Nature's Farmacy: The aggregate of all these three-letter citations. |
| P450-Inhibitor 50-100 uM | Father Nature's Farmacy: The aggregate of all these three-letter citations. |
| PGE2-Inhibitor | |
| PTK-Inhibitor 0.4-24 uM | |

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| Pesticide | |
| Phospholipase-Inhibitor | |
| Plasmodicide | Neuwinger, H. D. 1996. African Ethnobotany - Poisons and Drugs. Chapman & Hall, New York. 941 pp. |
| Proliferant | |
| Prostaglandin-Synthesis-Inhibitor 40 ug/ml | Ibewuik, J. C., Ogungbamila, F. O., Ogundaini, A. O., Okeke, I. N., Bohlin, L. 1997. Antiinflammatory and Antibacterial Activities of C-methylflavonol from <i>Piliostigma thonningii</i> . <i>Phytotherapy Research</i> , 11(4): 281-284. |
| Protein-Kinase-C-Inhibitor | Naim, M., Zehavi, U., Nagy, S., and Rouseff, R.L. Hydroxycinnamic Acids as Off-Flavor Precursors in Citrus Fruits and Their Products. <i>Phenolic Compounds in Food and Their Effects on Health</i> , Ch.14. |
| Quinone-Reductase-Inducer 6 uM | Uda, Y., Price, K. R., Williamson, G., Rhodes, M. J. C. 1997. Induction of the Anticarcinogenic Marker Enzyme, Quinone Reductase, in Murine Hepatoma Cells In Vitro by Flavonoids. <i>Cancer Lett.</i> , 120 (2): 213-216. |
| Quinone-Reductase-Inducer 13 uM | |
| TNF-alpha-Inhibitor IC50=3.11 uM | |
| Teratologic | |
| Topoisomerase-I-Inhibitor IC50=12.8 ug/ml | |
| Topoisomerase-I-Inhibitor IC50=42 uM | |
| Topoisomerase-II-Inhibitor IC50=1-6.9 ug/ml | |
| Topoisomerase-II-Inhibitor IC50=23-40 uM | |
| Tumorigenic 0.1% diet orl rat/yr | Jim Duke's personal files. |
| Tyrosinase-Inhibitor ID50=70 uM | |
| Tyrosine-Kinase-Inhibitor | Economic & Medicinal Plant Research, 6: 170. |
| VEGF-Inhibitor | |
| Vasodilator | |
| Xanthine-Oxidase-Inhibitor IC50=>0.4 ug/ml | Chem. & Pharm. Bull. 38: 1772. |
| Xanthine-Oxidase-Inhibitor IC50=10.6 ug/ml | |
| Xanthine-Oxidase-Inhibitor 3.1 uM | |
| cAMP-Phosphodiesterase-Inhibitor | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| iNOS-Inhibitor IC50=20 uM | |

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|---------------------------------|---------------|----|----|---|
| QUERCETIN-3-O-RHAMNOGALACTOSIDE | Leaf | -- | -- | * |
| QUERCETIN-3-RHAMNOGALACTOSIDE | Plant | -- | -- | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| RHAMNOSYLIORIENTIN | Inflorescence | -- | -- | * |
| RHAMNOSYLVITEXIN | Inflorescence | -- | -- | * |
| RUTIN | Leaf | -- | -- | * |

Activities (87)

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|---|---|
| 5-HT-Inhibitor | |
| Aldehyde-Oxidase-Inhibitor IC27-52=10 uM | |
| Aldose-Reductase-Inhibitor 100 uM | |
| Aldose-Reductase-Inhibitor 4 ug/ml | Ichikawa, K., et al. 1991. Isolation and Structure Determination of Aldose Reductase Inhibitors from Traditional Thai Medicine, and Syntheses of Their Derivatives. <i>Sankyo Kenkyusho Nempo</i> , 43: 99-110. |
| Allelochemic | |
| AntiCVI 270 mg/man/day | |
| Antiaggregant ED50=33 nmol/kg iv | |
| Antiallergic | |
| Antiapoplectic | |
| Antiatherogenic | |
| Antiatherosclerotic | |
| Antibacterial | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants.</i> Taylor & Frost, London. 791 pp. |
| Anticancer | |
| Anticapillary-Fragility 20-100 mg orl man | Merck 7th Ed. |
| Anticataract | |
| Anticlastogen | |

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|-------------------------------------|--|
| Anticonvulsant | Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp. |
| Antidementia | Bruneton, J. 1999. Pharmacognosy, Phytochemistry, Medicinal Plants. 2nd Ed. Lavoisier Publishing, Paris. 1119 pp. |
| Antidermatitic | Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp. |
| Antidiabetic | Jin, G-Z., Yamagata, Y., and Tomita, K.-i. 1989. Structure of Rutin Pentamethanol. Chem. Pharm. Bull. 38(2): 297-300, 1990. |
| Antiedemic 270 mg/day orl man | |
| Antierhythmic | |
| Antifeedant | |
| Antiglaucomic 60 mg/day | Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp. |
| Antihematuric | |
| Antihemorrhoidal | |
| Antihepatotoxic | Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp. |
| Antiherpetic | Economic & Medicinal Plant Research, 5: 198. |
| Antihistaminic | |
| Antihypertensive | Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp. |
| Antiinflammatory 20 mg/kg | |
| Antimalarial IC50=>100 ug/ml | Khalid, S.A., Farouk, A., Geary**, T.G., and Jensen, J.B. 1985. Potential Antimalarial Candidates From African Plants: An In Vitro Approach Using Plasmodium falciparum*. Journal of Ethnopharmacology, 15: 201-209, 1986. |
| Antimelanomic | |
| Antimetastatic | |
| Antimutagenic ID50=2-5 nM | |
| Antinephritic | |
| Antinociceptive | |
| Antioxidant IC28=30 ppm | |
| Antioxidant IC50=120 uM | |
| Antioxidant IC54=10 uM | |
| Antiperoxidant IC50=10-20 uM | |
| Antiplatelet | |
| Antiproliferant 50-75 uM/l | |
| Antiprotozoal | |
| Antipurpuric | |
| Antiradicular 9 x quercetin | |
| Antispasmodic | |
| Antisunburn | |
| Antithrombogenic EC50=500 nM | |
| Antithyroid IC50=68 uM | |
| Antitrypanosomic 100 mg/kg | Planta Medica, 57: A44, 1991. |
| Antitumor | |
| Antitumor-Promoter | |
| Antiulcer | |
| Antivaricose | |
| Antiviral | |
| Apoptotic 75 uM/l | |
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Capillariprotective | Merck 11th Edition |
| Catabolic | |
| Chemopreventive | |
| Cytoprotective IC50=3 uM | |
| Estrogenic? | Economic & Medicinal Plant Research, 6: 189. |
| Hemostat | |
| Hepatomagenic 20,000 ppm (diet) rat | Phenolic Compounds in Food and Their Effects on Health. Antioxidants & Cancer Prevention. Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. ACS Symposium Series 507.ACS, Washington 402 pp. |
| Hepatoprotective 20 mg/kg rat | |
| Hypocholesterolemic | Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp. |
| Hypotensive | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| Immunomodulator | |
| Insecticide | Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp. |
| Insectiphile | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Juvabional | Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990. |
| Larvostat IC95=4,000-8,000 ppm diet | Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology, v. 4, Oryx Press, Phoenix, 1989, 267pp. |
| Lipoxygenase-Inhibitor IC75=2.5 mM | Oszmianski, J. and Lee, C.Y. 1990. Inhibitory Effect of Phenolics on Carotene Bleaching in Vegetables. J. Agric. Food Chem. 38: 688-690. |

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|---|--|
| Antiproliferant 50-75 uM/l | |
| Antiprotozoal | |
| Antipurpuric | |
| Antiradicular 9 x quercetin | |
| Antispasmodic | |
| Antisunburn | |
| Antithrombogenic EC50=500 nM | |
| Antithyroid IC50=68 uM | |
| Antitrypanosomic 100 mg/kg | Planta Medica, 57: A44, 1991. |
| Antitumor | |
| Antitumor-Promoter | |
| Antiulcer | |
| Antivaricose | |
| Antiviral | |
| Apoptotic 75 uM/l | |
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Capillari-protective | Merck 11th Edition |
| Catabolic | |
| Chemopreventive | |
| Cytoprotective IC50=3 uM | |
| Estrogenic? | Economic & Medicinal Plant Research, 6: 189. |
| Hemostat | |
| Hepatomagenic 20,000 ppm (diet) rat | Phenolic Compounds in Food and Their Effects on Health. Antioxidants & Cancer Prevention. Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. ACS Symposium Series 507.ACS, Washington 402 pp. |
| Hepatoprotective 20 mg/kg rat | |
| Hypocholesterolemic | Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp. |
| Hypotensive | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| Immunomodulator | |
| Insecticide | Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp. |
| Insectiphile | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Juvabional | Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990. |
| Larvostat IC95=4,000-8,000 ppm diet | Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology, v. 4, Oryx Press, Phoenix, 1989, 267pp. |
| Lipoxygenase-Inhibitor IC75=2.5 mM | Ozmianski, J. and Lee, C.Y. 1990. Inhibitory Effect of Phenolics on Carotene Bleaching in Vegetables. J. Agric. Food Chem. 38: 688-690. |
| Mutagenic | Economic & Medicinal Plant Research, 6: 189. |
| Myoprotective | |
| Myorelaxant | Economic & Medicinal Plant Research, 6: 189. |
| Oviposition-Stimulant | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| PAF-Inhibitor | |
| Pesticide | |
| Protisticide | |
| Radioprotective | |
| Sunscreen | |
| Topoisomerase-II-Inhibitor IC50=1 ug/ml | Bernard, F. X., Sable, S., Cameron, B., Provost, J., Desnottes, J. F., Crouzet, J., Blanche, F. 1997. Glycosylated Flavones as Selective Inhibitors of Topoisomerase IV. Antimicrobial Agents & Chemotherapy, 41: 992-998. |
| Vasodilator | |
| Vasopressor | |
| cAMP-Phosphodiesterase-Inhibitor | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |

RUTIN Flower -- -- *

Activities (87)

| | |
|--|---|
| 5-HT-Inhibitor | |
| Aldehyde-Oxidase-Inhibitor IC27-52=10 uM | |
| Aldose-Reductase-Inhibitor 100 uM | |
| Aldose-Reductase-Inhibitor 4 ug/ml | Ichikawa, K., et al. 1991. Isolation and Structure Determination of Aldose Reductase Inhibitors from Traditional Thai Medicine, and Syntheses of Their Derivatives. Sankyo Kenkyusho Nempo, 43: 99-110. |
| Allelochemic | |
| AntiCVI 270 mg/man/day | |
| Antiaggregant ED50=33 nmol/kg iv | |

| | |
|---|--|
| Antiallergic | |
| Antiapoplectic | |
| Antiatherogenic | |
| Antiatherosclerotic | |
| Antibacterial | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants.</i> Taylor & Frost, London. 791 pp. |
| Anticancer | |
| Anticapillary-Fragility 20-100 mg orl man | Merck 7th Ed. |
| Anticataract | |
| Anticlastogen | |
| Anticonvulsant | Huang, K. C. 1993. <i>The Pharmacology of Chinese Herbs.</i> CRC Press, Boca Raton, FL 388 pp. |
| Antidementia | Bruneton, J. 1999. <i>Pharmacognosy, Phytochemistry, Medicinal Plants.</i> 2nd Ed. Lavoisier Publishing, Paris. 1119 pp. |
| Antidermatitic | Bisset, N.G., ed. 1994. <i>Herbal Drugs and Phytopharmaceuticals.</i> CRC Press. Boca Raton, FL. 566 pp. |
| Antidiabetic | Jin, G-Z., Yamagata, Y., and Tomita, K.-i. 1989. Structure of Rutin Pentamethanol. <i>Chem. Pharm. Bull.</i> 38(2): 297-300, 1990. |
| Antiedemic 270 mg/day orl man | |
| Antierythemic | |
| Antifeedant | |
| Antiglaucomic 60 mg/day | Werbach, M. 1993. <i>Healing with Food.</i> Harper Collins, New York, 443 pp. |
| Antihematuric | |
| Antihemorrhoidal | |
| Antihepatotoxic | Keeler, R.F. and Tu, A.T. eds. 1991. <i>Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6)</i> Marcel Dekker, Inc. NY. 665 pp. |
| Antiherpetic | <i>Economic & Medicinal Plant Research</i> , 5: 198. |
| Antihistaminic | |
| Antihypertensive | Huang, K. C. 1993. <i>The Pharmacology of Chinese Herbs.</i> CRC Press, Boca Raton, FL 388 pp. |
| Antiinflammatory 20 mg/kg | |
| Antimalarial IC50=>100 ug/ml | Khalid, S.A., Farouk, A., Geary**, T.G., and Jensen, J.B. 1985. Potential Antimalarial Candidates From African Plants: An In Vitro Approach Using <i>Plasmodium falciparum</i> *. <i>Journal of Ethnopharmacology</i> , 15: 201-209, 1986. |
| Antimelanomic | |
| Antimetastatic | |
| Antimutagenic ID50=2-5 nM | |
| Antinephritic | |
| Antinociceptive | |
| Antioxidant IC28=30 ppm | |
| Antioxidant IC50=120 uM | |
| Antioxidant IC54=10 uM | |
| Antiperoxidant IC50=10-20 uM | |
| Antiplatelet | |
| Antiproliferant 50-75 uM/l | |
| Antiprotozoal | |
| Antipurpuric | |
| Antiradicular 9 x quercetin | |
| Antispasmodic | |
| Antisunburn | |
| Antithrombogenic EC50=500 nM | |
| Antithyroid IC50=68 uM | |
| Antitrypanosomic 100 mg/kg | <i>Planta Medica</i> , 57: A44, 1991. |
| Antitumor | |
| Antitumor-Promoter | |
| Antiulcer | |
| Antivaricose | |
| Antiviral | |
| Apoptotic 75 uM/l | |
| Cancer-Preventive | Stitt, P. A. <i>Why George Should Eat Broccoli.</i> Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Capillariprotective | Merck 11th Edition |
| Catabolic | |
| Chemopreventive | |
| Cytoprotective IC50=3 uM | |
| Estrogenic? | <i>Economic & Medicinal Plant Research</i> , 6: 189. |
| Hemostat | |
| Hepatomagenic 20,000 ppm (diet) rat | <i>Phenolic Compounds in Food and Their Effects on Health. Antioxidants & Cancer Prevention.</i> Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. ACS Symposium Series 507.ACS, Washington 402 pp. |
| Hepatoprotective 20 mg/kg rat | |

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|---|--|
| Hypocholesterolemic | Huang, K. C. 1993. <i>The Pharmacology of Chinese Herbs</i> . CRC Press, Boca Raton, FL 388 pp. |
| Hypotensive | Leung, A. Y. and Foster, S. 1995. <i>Encyclopedia of Common Natural Ingredients</i> 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| Immunomodulator | |
| Insecticide | Keeler, R.F. and Tu, A.T. eds. 1991. <i>Toxicology of Plant and Fungal Compounds</i> . (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp. |
| Insectiphile | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp. |
| Juvabional | Jacobson, M., <i>Glossary of Plant-Derived Insect Deterrents</i> , CRC Press, Inc., Boca Raton, FL, 213 p, 1990. |
| Larvostat IC95=4,000-8,000 ppm diet | Lydon, J. & Duke, S., <i>The potential of pesticides from plants</i> , pp. 1-41 in Craker, L. & Simon, J., eds, <i>Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology</i> , v. 4, Oryx Press, Phoenix, 1989, 267pp. |
| Lipoxygenase-Inhibitor IC75=2.5 mM | Ozsmianski, J. and Lee, C.Y. 1990. <i>Inhibitory Effect of Phenolics on Carotene Bleaching in Vegetables</i> . <i>J. Agric. Food Chem.</i> 38: 688-690. |
| Mutagenic | <i>Economic & Medicinal Plant Research</i> , 6: 189. |
| Myoprotective | |
| Myorelaxant | <i>Economic & Medicinal Plant Research</i> , 6: 189. |
| Oviposition-Stimulant | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp. |
| PAF-Inhibitor | |
| Pesticide | |
| Protisticide | |
| Radioprotective | |
| Sunscreen | |
| Topoisomerase-II-Inhibitor IC50=1 ug/ml | Bernard, F. X., Sable, S., Cameron, B., Provost, J., Desnottes, J. F., Cruzet, J., Blanche, F. 1997. <i>Glycosylated Flavones as Selective Inhibitors of Topoisomerase IV</i> . <i>Antimicrobial Agents & Chemotherapy</i> , 41: 992-998. |
| Vasodilator | |
| Vasopressor | |
| cAMP-Phosphodiesterase-Inhibitor | Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf). |

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|------------------------|---------------|----|----|--|--|
| SAPONARETIN-RHAMNOSIDE | Inflorescence | -- | -- | | * |
| SAPONINS | Fruit | -- | -- | | Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. <i>Herbal Medicine - A Guide for Health-care Professionals</i> . The Pharmaceutical Press, London. 296pp. |

Activities (5)

Antihepatomic
 Antimutagenic
 Antitumor (Lung)
 Antitumor (Ovary)
 Immunomodulator

| | | | | | |
|-------------|------|----|-----|------|---|
| SCHAFTOSIDE | Leaf | -- | 9.0 | -1.0 | * |
|-------------|------|----|-----|------|---|

Activities (1)

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

| | | | | | |
|-------------|--------|----|----|--|---|
| SCHAFTOSIDE | Flower | -- | -- | | * |
|-------------|--------|----|----|--|---|

Activities (1)

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

| | | | | | |
|----------------|--------|----|----|--|---|
| SEXANGULARETIN | Flower | -- | -- | | * |
|----------------|--------|----|----|--|---|

| | | | | | |
|-------------------------------------|--------|----|---------|--|---|
| SEXANGULARETIN-3-O-BETA-D-GLUCOSIDE | Flower | -- | 16000.0 | | * |
|-------------------------------------|--------|----|---------|--|---|

| | | | | | |
|-------------|--------|----|----|--|---|
| SEXULARETIN | Flower | -- | -- | | * |
|-------------|--------|----|----|--|---|

| | | | | | |
|-------------|------|----|----|--|---|
| SPIRAEOSIDE | Leaf | -- | -- | | * |
|-------------|------|----|----|--|---|

Activities (4)

Aldose-Reductase-Inhibitor IC9=1 uM
 Aldose-Reductase-Inhibitor IC51=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.
 Antioxidant Okamura, H., Mimura, A., Yakou, Y., Niwano, M., and Takahara, Y. 1992. *Antioxidant Activity of Tannins and Flavonoids in Eucalyptus rostrata*. *Phytochemistry*. 33(3): 557-561. 1993.
 Quinone-Reductase-Inducer Yannai, S., Day, A. J., Williamson, G., Rhodes, M. J. C. 1998. *Characterization of Flavonoids as Monofunctional or Bifunctional Inducers of Quinone Reductase in Murine Hepatoma Cell Lines*. *Food Chem Toxicol*, 36(8): 623-630.

| | | | | | |
|-------------|--------|----|----|--|---|
| SPIRAEOSIDE | Flower | -- | -- | | * |
|-------------|--------|----|----|--|---|

| | | | | |
|---------------------------------------|---|----|----|--|
| Activities (4) | | | | |
| Aldose-Reductase-Inhibitor IC9=1 uM | | | | |
| Aldose-Reductase-Inhibitor IC51=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. <i>Phytochemistry</i> , 23: 1885-1888. | | | |
| Antioxidant | Okamura, H., Mimura, A., Yakou, Y., Niwano, M., and Takahara, Y. 1992. Antioxidant Activity of Tannins and Flavonoids in <i>Eucalyptus rostrata</i> . <i>Phytochemistry</i> . 33(3): 557-561. 1993. | | | |
| Quinone-Reductase-Inducer | Yannai, S., Day, A. J., Williamson, G., Rhodes, M. J. C. 1998. Characterization of Flavonoids as Monofunctional or Bifunctional Inducers of Quinone Reductase in Murine Hepatoma Cell Lines. <i>Food Chem Toxicol</i> , 36(8): 623-630. | | | |
| TANNINS | Flower | -- | -- | * |
| TETRACOSAN-1-OL | Shoot | -- | -- | * |
| TRIACONTAN-1-OL | Shoot | -- | -- | * |
| Activities (1) | | | | |
| Hormonal | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp. | | | |
| TRICOSAN-1-OL | Shoot | -- | -- | * |
| TRIMETHYLAMINE | Plant | -- | -- | Leung, A. Y. and Foster, S. 1995. <i>Encyclopedia of Common Natural Ingredients 2nd Ed.</i> John Wiley & Sons, New York. 649 pp. |
| Activities (1) | | | | |
| Antioxidant | | | | |
| TYRAMINE | Plant | -- | -- | Leung, A. Y. and Foster, S. 1995. <i>Encyclopedia of Common Natural Ingredients 2nd Ed.</i> John Wiley & Sons, New York. 649 pp. |
| Activities (11) | | | | |
| Adrenergic | Merck 11th Edition | | | |
| Antiaaggregant | | | | |
| Cardiovascular 0.8 ivn cat | Borchard, R. E., Barnes, C. D., and Eltherton, L. G. 1991. <i>Drug Dosage in Laboratory Animals: A Handbook</i> . (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. <i>Drug Dosage in Laboratory Animals: A Handbook</i> . (3rd Ed.) The Telford Press, Inc., P. O. Box 287, Caldwell NJ 07006. | | | |
| Hypertensive | Nigg, H.N. and Seigler, D.S., eds. 1992. <i>Phytochemical Resources for Medicine and Agriculture</i> . Plenum Press, New York. 445 pp. | | | |
| Insectifuge | Grainge, M. and Ahmed, S., <i>Handbook of Plants with Pest-Control Properties</i> , 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. <i>Drug Dosage in Laboratory Animals: A Handbook</i> . (3rd Ed.) The Telford Press, Inc., P. O. Box 287, Caldwell NJ 07006. | | | |
| Pesticide | | | | |
| Sympathomimetic | | | | |
| Vasoconstrictor | | | | |
| Vasopressor | | | | |
| URIC-ACID | Plant | -- | -- | Leung, A. Y. and Foster, S. 1995. <i>Encyclopedia of Common Natural Ingredients 2nd Ed.</i> John Wiley & Sons, New York. 649 pp. |
| URSOLIC-ACID | Inflorescence | -- | -- | * |
| Activities (89) | | | | |
| Analgesic | | | | |
| AntiEBV | Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. <i>Herbal Medicine - A Guide for Health-care Professionals</i> . The Pharmaceutical Press, London. 296pp. | | | |
| 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 | 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 IC85=18 ug/ml | | | | |
| AntiHIV 6.7 uM | | | | |
| AntiTGF-beta IC50=6-7.5 uM | | | | |
| Antialzheimeran | 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. | | | |
| Antiarrhythmic | | | | |
| Antiarthritic | <i>Planta Medica</i> , 57: A56, 1991. | | | |
| Antibacterial | | | | |
| Anticancer | 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. | | | |
| Anticancer (Colon) | 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. | | | |
| 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 2nd Ed.</i> John Wiley & Sons, New York. 649 pp. | | | |

| | |
|---|--|
| Anticholestatic 28-100 mg/kg orl | Shukla, B., Visen, P.K.S., Patnaik, G.K., Tripathi, S.C., Srimal, R.C., Dayal, R., and Dobhal, P.C. Hepatoprotective Activity in the Rat of Ursolic Acid Isolated from Eucalyptus Hybrid. <i>Phytotherapy Research</i> 6: 74-79, 1992. |
| Anticomplement IC100 0.1 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. |
| Antidiabetic | Chemical Constituents of Oriental Herbs (3 diff. books) |
| Antiedemic | |
| Antiescherichic | |
| Antifibrosarcomic IC80=10 uM | |
| Antihepatotoxic 5-20 mg/kg ipr | Shukla, B., Visen, P.K.S., Patnaik, G.K., Tripathi, S.C., Srimal, R.C., Dayal, R., and Dobhal, P.C. Hepatoprotective Activity in the Rat of Ursolic Acid Isolated from Eucalyptus Hybrid. <i>Phytotherapy Research</i> 6: 74-79, 1992. |
| Antihistaminic | Tsuruga, T., Chun, Y.-T., Ebizuka, Y., and Sankawa, U. 1991. Biologically Active Constituents of <i>Melaleuca leucadendron</i> : Inhibitors of Induced Histamine Release from Rat Mast Cells. <i>Chem. Pharm. Bull.</i> 39(12): 3276-3278, 1991. |
| Antihyperlipidemic | |
| Antiinflammatory 1/3 indomethacin | |
| Antiinflammatory IC24=500 mg/kg | |
| Antileishmanic ED50=20 uM | |
| Antileukemic IC50=2.5-17.8 ug/ml | |
| Antilymphomic | Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. <i>Herbal Medicine - A Guide for Health-care Professionals</i> . The Pharmaceutical Press, London. 296pp. |
| Antimalarial IC50=28-37 ug/ml | |
| Antimetastatic IC80=10 uM | |
| Antimutagenic IC57-80=80 mg/kg | |
| Antinephritic IC50=6-7.5 uM | |
| Antiobesity? | <i>Internat. J. Oriental Med.</i> 16: 4. |
| Antioxidant IC50=10 uM | |
| Antiperoxidant IC35=200 ug/ml | |
| Antiplasmodial IC50=28-37 ug/ml | |
| Antiproliferative IC50=15-20 uM | |
| Antistaphylococcic | |
| Antithromboxane IC50=50 uM | |
| Antitrypanosomic | |
| Antitumor | <i>Cancer Research</i> , 54: 701, 1994. |
| Antitumor (Breast) 0.5% diet | |
| Antitumor (Breast) IC50=15-20 uM | |
| Antitumor (Cervix) | 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) | |
| Antitumor (Lung) | |
| Antitumor (Ovary) | 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 (Stomach) IC50=15-20 uM | |
| Antitumor (brain) | 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-Promoter | <i>Planta Medica</i> , 57: A56, 1991. |
| Antiulcer | Shukla, B., Visen, P.K.S., Patnaik, G.K., Tripathi, S.C., Srimal, R.C., Dayal, R., and Dobhal, P.C. Hepatoprotective Activity in the Rat of Ursolic Acid Isolated from Eucalyptus Hybrid. <i>Phytotherapy Research</i> 6: 74-79, 1992. |
| Antiviral IC85=18 ug/ml | |
| Aromatase-Inhibitor | |
| Beta-Blocker | |
| Beta-Glucuronidase-Inhibitor ~100 mg/kg | |
| CNS-Depressant | |
| COX-2-Inhibitor IC50=130 uM/ | |
| Cancer-Preventive | Stitt, P. A. <i>Why George Should Eat Broccoli</i> . Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Candidicide | |
| Cardioprotective | |
| Cardiotonic | |
| Choleretic 5-20 mg/kg orl | Shukla, B., Visen, P.K.S., Patnaik, G.K., Tripathi, S.C., Srimal, R.C., Dayal, R., and Dobhal, P.C. Hepatoprotective Activity in the Rat of Ursolic Acid Isolated from Eucalyptus Hybrid. <i>Phytotherapy Research</i> 6: 74-79, 1992. |
| Cyclooxygenase-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. |
| Cytotoxic 50 ppm | |

| | |
|-------------------------------------|--|
| Cytotoxic ED50=3.75 ug/ml | |
| Cytotoxic 7.2 uM | |
| Diuretic | |
| Elastase-Inhibitor IC50=15 uM | |
| Hepatoprotective 1-100 ug/ml | |
| Hepatoprotective 10 mg/kg | |
| Hypoglycemic | Ivorra, M.D., Paya, M., and Villar, A. 1989. A Review of Natural Products and Plants as Potential Antidiabetic Drugs. <i>Journal of Ethnopharmacology</i> , 27: 243-275, 1989. |
| Hypotensive | |
| Immunomodulator | |
| Leucocytogenic | |
| Lipoxygenase-Inhibitor IC50=0.18 mM | |
| MMP-9-Inhibitor IC80=10 uM | |
| Ornithine-Decarboxylase-Inhibitor | |
| Pesticide | |
| Piscicide | |
| Potassium-Sparing 3 mg/rat | Iwu, M.M. 1993. <i>Handbook of African Medicinal Plants</i> . CRC Press, Boca Raton, FL 435 pp. |
| Protease-Inhibitor IC85=18 ug/ml | |
| Protistocidal | Chemical Express, 7: 285, 1992. |
| Quinone-Reductase-Inducer 5 ug/ml | Lee, S. K., Song, Y., Mata-Greenwood, E., Kelloff, G. J., Steele, V. E., Pezzuto, J. M. 1999. Modulation of in vitro Biomarkers of the Carcinogenic Process by Chemopreventive Agents. <i>Anticancer Res.</i> , 19: 35-44. |
| Sodium-Sparing 3 mg/rat | Iwu, M.M. 1993. <i>Handbook of African Medicinal Plants</i> . CRC Press, Boca Raton, FL 435 pp. |
| TOPO-2-Inhibitor | |
| Trypanocidal | |
| Vasopressor | |
| URSOLIC-ACID | Plant -- -- Leung, A. Y. and Foster, S. 1995. <i>Encyclopedia of Common Natural Ingredients</i> 2nd Ed. John Wiley & Sons, New York. 649 pp. |

Activities (89)

| | |
|--------------------------------------|--|
| Analgesic | |
| AntiEBV | Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. <i>Herbal Medicine - A Guide for Health-care Professionals</i> . The Pharmaceutical Press, London. 296pp. |
| 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 | 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 IC85=18 ug/ml | |
| AntiHIV 6.7 uM | |
| AntiTGF-beta IC50=6-7.5 uM | |
| Antialzheimeran | 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. |
| Antiarrhythmic | |
| Antiarthritic | <i>Planta Medica</i> , 57: A56, 1991. |
| Antibacterial | |
| Anticancer | 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. |
| Anticancer (Colon) | 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. |
| 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. |
| Anticholestatic 28-100 mg/kg orl | Shukla, B., Visen, P.K.S., Patnaik, G.K., Tripathi, S.C., Srimal, R.C., Dayal, R., and Dobhal, P.C. Hepatoprotective Activity in the Rat of Ursolic Acid Isolated from <i>Eucalyptus Hybrid</i> . <i>Phytotherapy Research</i> 6: 74-79, 1992. |
| Anticomplement IC100 0.1 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. |
| Antidiabetic | <i>Chemical Constituents of Oriental Herbs</i> (3 diff. books) |
| Antiedemic | |
| Antiescherichic | |
| Antifibrosarcomic IC80=10 uM | |
| Antihepatotoxic 5-20 mg/kg ipr | Shukla, B., Visen, P.K.S., Patnaik, G.K., Tripathi, S.C., Srimal, R.C., Dayal, R., and Dobhal, P.C. Hepatoprotective Activity in the Rat of Ursolic Acid Isolated from <i>Eucalyptus Hybrid</i> . <i>Phytotherapy Research</i> 6: 74-79, 1992. |
| Antihistaminic | Tsuruga, T., Chun, Y.-T., Ebizuka, Y., and Sankawa, U. 1991. Biologically Active Constituents of <i>Melaleuca leucadendron</i> : Inhibitors of Induced Histamine Release from Rat Mast Cells. <i>Chem. Pharm. Bull.</i> 39(12): 3276-3278, 1991. |
| Antihyperlipidemic | |
| Antiinflammatory 1/3 indomethacin | |

| | |
|---|---|
| Antiinflammatory IC24=500 mg/kg | |
| Antileishmanic ED50=20 uM | |
| Antileukemic IC50=2.5- 17.8 ug/ml | |
| Antilymphomic | Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp. |
| Antimalarial IC50=28-37 ug/ml | |
| Antimetastatic IC80=10 uM | |
| Antimutagenic IC57- 80=80 mg/kg | |
| Antinephritic IC50=6-7.5 uM | |
| Antioesity? | Internat. J. Oriental Med. 16: 4. |
| Antioxidant IC50=10 uM | |
| Antiperoxidant IC35=200 ug/ml | |
| Antiplasmodial IC50=28- 37 ug/ml | |
| Antiproliferative IC50=15-20 uM | |
| Antistaphylococcic | |
| Antithromboxane IC50=50 uM | |
| Antitrypanosomic | |
| Antitumor | Cancer Research, 54: 701, 1994. |
| Antitumor (Breast) 0.5% diet | |
| Antitumor (Breast) IC50=15-20 uM | |
| Antitumor (Cervix) | 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. |
| Antitumor (Colon) | |
| Antitumor (Lung) | |
| Antitumor (Ovary) | 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. |
| Antitumor (Stomach) IC50=15-20 uM | |
| Antitumor (brain) | 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. |
| Antitumor-Promoter | Planta Medica, 57: A56, 1991. |
| Antiulcer | Shukla, B., Visen, P.K.S., Patnaik, G.K., Tripathi, S.C., Srimal, R.C., Dayal, R., and Dobhal, P.C. Hepatoprotective Activity in the Rat of Ursolic Acid Isolated from Eucalyptus Hybrid. Phytotherapy Research 6: 74-79, 1992. |
| Antiviral IC85=18 ug/ml | |
| Aromatase-Inhibitor | |
| Beta-Blocker | |
| Beta-Glucuronidase- Inhibitor ~100 mg/kg | |
| CNS-Depressant | |
| COX-2-Inhibitor IC50=130 uM/ | |
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Candidicide | |
| Cardioprotective | |
| Cardiotonic | |
| Choleretic 5-20 mg/kg orl | Shukla, B., Visen, P.K.S., Patnaik, G.K., Tripathi, S.C., Srimal, R.C., Dayal, R., and Dobhal, P.C. Hepatoprotective Activity in the Rat of Ursolic Acid Isolated from Eucalyptus Hybrid. Phytotherapy Research 6: 74-79, 1992. |
| Cyclooxygenase-Inhibitor | Ringbom, T., Seguar, L., Noreen, Y., Perera, P., Bohlin, L. 1998. Ursolic Acid from Plantago major, a Selective Inhibitor of Cyclooxygenase-2 Catalyzed Prostaglandin Biosynthesis. J. Nat. Prod., 61(10): 1212-1215. |
| Cytotoxic 50 ppm | |
| Cytotoxic ED50=3.75 ug/ml | |
| Cytotoxic 7.2 uM | |
| Diuretic | |
| Elastase-Inhibitor IC50=~15 uM | |
| Hepatoprotective 1-100 ug/ml | |
| Hepatoprotective 10 mg/kg | |
| Hypoglycemic | Ivorra, M.D., Paya, M., and Villar, A. 1989. A Review of Natural Products and Plants as Potential Antidiabetic Drugs. Journal of Ethnopharmacology, 27: 243-275, 1989. |
| Hypotensive | |
| Immunomodulator | |
| Leucocytogenic | |
| Lipoxygenase-Inhibitor IC50=0.18 mM | |

| | | | | |
|-----------------------------------|--|--|--|--|
| MMP-9-Inhibitor IC80=10 uM | | | | |
| Ornithine-Decarboxylase-Inhibitor | | | | |
| Pesticide | | | | |
| Piscicide | | | | |
| Potassium-Sparing 3 mg/rat | Iwu, M.M. 1993. Handbook of African Medicinal Plants. CRC Press, Boca Raton, FL 435 pp. | | | |
| Protease-Inhibitor IC85=18 ug/ml | | | | |
| Protisticide | Chemical Express, 7: 285, 1992. | | | |
| Quinone-Reductase-Inducer 5 ug/ml | Lee, S. K., Song, Y., Mata-Greenwood, E., Kelloff, G. J., Steele, V. E., Pezzuto, J. M. 1999. Modulation of in vitro Biomarkers of the Carcinogenic Process by Chemopreventive Agents. Anticancer Res., 19: 35-44. | | | |
| Sodium-Sparing 3 mg/rat | Iwu, M.M. 1993. Handbook of African Medicinal Plants. CRC Press, Boca Raton, FL 435 pp. | | | |
| TOPO-2-Inhibitor | | | | |
| Trypanocide | | | | |

| | | | | |
|--------------------------|--------|----|-----|---|
| Vasopressor VICENIN-1 | Leaf | -- | 3.0 | * |
| VICENIN-1 | Flower | -- | -- | * |
| VICENIN-2 | Flower | -- | -- | * |

Activities (12)

- ACE-Inhibitor IC50=0.2 mM/l
 - Antiangiogenic
 - Anticancer
 - Anticancer (Prostate)
 - Anticarcinomic
 - Antiinflammatory ED50=148 (ipr mus)
 - Antiproliferant
 - Apoptotic
 - Cyclin-B1-Inhibitor
 - Cyclin-D1-Inhibitor
 - Oviposition-Stimulant
 - Radioprotective
- Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.

| | | | | |
|-----------|------|----|-----|---|
| VICENIN-2 | Leaf | -- | 3.0 | * |
|-----------|------|----|-----|---|

Activities (12)

- ACE-Inhibitor IC50=0.2 mM/l
 - Antiangiogenic
 - Anticancer
 - Anticancer (Prostate)
 - Anticarcinomic
 - Antiinflammatory ED50=148 (ipr mus)
 - Antiproliferant
 - Apoptotic
 - Cyclin-B1-Inhibitor
 - Cyclin-D1-Inhibitor
 - Oviposition-Stimulant
 - Radioprotective
- Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.

| | | | | |
|-----------|--------|----|----|---|
| VICENIN-3 | Flower | -- | -- | * |
|-----------|--------|----|----|---|

| | | | | |
|-----------|------|----|-----|---|
| VICENIN-3 | Leaf | -- | 3.0 | * |
|-----------|------|----|-----|---|

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

Activities (18)

ACE-Inhibitor 5 ug/ml

ACE-Inhibitor IC50=0.3 mM/l

Aldose-Reductase-Inhibitor IC15=10 uM Shimizu, M., Ito, T., Terashima, S., Hayashi, T., Arisawa, M., Morita, N., Kurokawa, S., Ito, K., and Hashimoto, Y. 1984. Inhibition of Lens Aldose Reductase by Flavonoids. *Phytochemistry*, 23: 1885-1888.

Aldose-Reductase-Inhibitor 5 ug/ml Okamoto, Y., Yoshizawa, T. 1994. Angiotensin-Converting Enzyme Inhibitors and Aldose Reductase Inhibitors Containing Passiflora quadrangularis Extracts or Vitexin. Patent, Japan Kokai Tokyo Koho-06,293,657. 4pp.

Antiarrhythmic Jim Duke's personal files.

Antibradycardiac Fitoterapia No.61: 277, 1990.

Antidermatitic

Antihistaminic

Antiinflammatory Fitoterapia No.61: 263, 1990.

Antioxidant

Antiserotoninic

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

Aphidifuge

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

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

Hypotensive

Thyroid-Peroxidase-Inhibitor Jeffery B. Harborne and H. Baxter, eds. 1983. *Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants.* Taylor & Frost, London. 791 pp.cAMP-Phosphodiesterase-Inhibitor IC50=1.6 mg/ml Schussler, M., Fricke, U., Nikolov, N., and Holz, J. 1991. Comparison of the Flavonoids Occurring in *Crataegus* species and Inhibition of 3',5'-Cyclic Adenosine Monophosphate Phosphodiesterase. *Plant Medica* 57: Suppl Issue 2. p.A-133.

VITEXIN

Leaf

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Activities (18)

ACE-Inhibitor 5 ug/ml

ACE-Inhibitor IC50=0.3 mM/l

Aldose-Reductase-Inhibitor IC15=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.

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VITEXIN

Fruit

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Activities (18)

ACE-Inhibitor 5 ug/ml

ACE-Inhibitor IC50=0.3 mM/l

Aldose-Reductase-Inhibitor IC15=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.

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Antibradiquinic *Fitoterapia* No.61: 277, 1990.

Antidermatitic

Antihistaminic

Antiinflammatory *Fitoterapia* No.61: 263, 1990.

Antioxidant

Antiserotoninic

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VITEXIN

Inflorescence -- -- *

Activities (18)

ACE-Inhibitor 5 ug/ml

ACE-Inhibitor IC50=0.3 mM/l

Aldose-Reductase-Inhibitor IC15=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.

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Antioxidant

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VITEXIN

Flower -- -- *

Activities (18)

ACE-Inhibitor 5 ug/ml

ACE-Inhibitor IC50=0.3 mM/l

Aldose-Reductase-Inhibitor IC15=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.

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Antihistaminic

Antiinflammatory *Fitoterapia* No.61: 263, 1990.

Antioxidant

Antiserotoninic

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VITEXIN-2'-BETA-RHAMNOSIDE Flower -- -- *

VITEXIN-2'-O-RHAMNOSIDE Inflorescence -- -- *

Activities (1)

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

VITEXIN-2'-O-RHAMNOSIDE Leaf -- -- *

Activities (1)

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

VITEXIN-2'-RHAMNOSIDE Leaf -- -- *

VITEXIN-2'-RHAMNOSIDE Flower -- -- *

VITEXIN-2'-RHAMNOSIDE Plant -- 5000.0 *

VITEXIN-4',7-DI-D-GLUCOSIDE Plant -- -- Leung, A. Y. and Foster, S. 1995. *Encyclopedia of Common Natural Ingredients* 2nd Ed. John Wiley & Sons, New York. 649 pp.VITEXIN-4',L-RHAMNO-D-GLUCOSIDE Plant -- -- Leung, A. Y. and Foster, S. 1995. *Encyclopedia of Common Natural Ingredients* 2nd Ed. John Wiley & Sons, New York. 649 pp.VITEXIN-4'-L-RHAMNOSIDE Plant -- -- Leung, A. Y. and Foster, S. 1995. *Encyclopedia of Common Natural Ingredients* 2nd Ed. John Wiley & Sons, New York. 649 pp.

VITEXIN-8-C-ALPHA-L-RHAMNOSYL-ACETYL-L-BETA-D-GLUCOSIDE Inflorescence -- -- *

VITEXIN-8-C-ALPHA-L-RHAMNOSYL-BETA-D-GLUCOSIDE Inflorescence -- -- *

VITEXIN-RHAMNOSIDE Inflorescence -- -- *

VITEXIN-RHAMNOSIDE Leaf -- -- *