

Activity	Chemical Count	Reference
<u>(-)-Chronotropic</u>	2	Duke, 1992 *
<u>11B-HSD-Inhibitor</u>	1	Duke, 1992 *
<u>5-HT-Inhibitor</u>	1	Duke, 1992 *
<u>5-Lipoxygenase-Inhibitor</u>	1	Duke, 1992 *
<u>Adrenergic-Blocker</u>	1	Duke, 1992 *
<u>Aldehyde-Oxidase-Inhibitor</u>	1	Duke, 1992 *
<u>Aldose-Reductase-Inhibitor</u>	4	Duke, 1992 *
<u>Allelochemic</u>	3	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.
<u>Allergenic</u>	1	Duke, 1992 *
<u>Anabolic</u>	1	Duke, 1992 *
<u>Analgesic</u>	1	Duke, 1992 *
<u>Anesthetic</u>	2	Iwu, M.M. 1993. Handbook of African Medicinal Plants. CRC Press, Boca Raton, FL 435 pp.
<u>Antiacne</u>	1	Duke, 1992 *
<u>Antiaflatoxin</u>	1	Duke, 1992 *
<u>Antiaggregant</u>	4	Duke, 1992 *
<u>Antiallergic</u>	2	Duke, 1992 *
<u>Antianaphylactic</u>	1	Duke, 1992 *
<u>Antiapoplectic</u>	1	Duke, 1992 *
<u>Antiarrhythmic</u>	3	Duke, 1992 *
<u>Antiatherogenic</u>	1	Duke, 1992 *
<u>Antiatherosclerotic</u>	2	Duke, 1992 *
<u>Antibacterial</u>	5	Duke, 1992 *
<u>Anticancer</u>	2	Duke, 1992 *
<u>Anticancer (Colon)</u>	1	Duke, 1992 *

Activity	Chemical Count	Reference
Anticancer (Forestomach)	1	Duke, 1992 *
Anticancer (Liver)	1	Duke, 1992 *
Anticancer (Skin)	1	Duke, 1992 *
Anticapillary-Fragility	1	Merck 7th Ed.
Anticarcinogenic	1	Duke, 1992 *
Anticariogenic	1	Muroi, H. and Kubo, I. 1993. Combination Effects of Antibacterial Compounds in Green Tea Flavor against Streptococcus mutans. <i>J. Agric. Food Chem.</i> 41: 1102-1105.
Anticataract	1	Duke, 1992 *
Anticlastogen	1	Duke, 1992 *
Anticomplementary	1	Duke, 1992 *
Anticonvulsant	1	Huang, K. C. 1993. <i>The Pharmacology of Chinese Herbs</i> . CRC Press, Boca Raton, FL 388 pp.
AntiCVI	1	Duke, 1992 *
Antidementia	3	Bruneton, J. 1999. <i>Pharmacognosy, Phytochemistry, Medicinal Plants</i> . 2nd Ed. Lavoisier Publishing, Paris. 1119 pp.
Antidermatitic	1	Bisset, N.G., ed. 1994. <i>Herbal Drugs and Phytopharmaceuticals</i> . CRC Press. Boca Raton, FL. 566 pp.
Antidiabetic	3	Duke, 1992 *
AntiEBV	2	Economic & Medicinal Plant Research, 6: 189.
Antiedemic	1	Duke, 1992 *
Antirythemic	1	Duke, 1992 *
Antiexcitotoxic	2	Duke, 1992 *
Antifeedant	3	Duke, 1992 *
Antifertility	1	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.

Activity	Chemical Count	Reference
Antigenotoxic	1	Duke, 1992 *
Antigingivitic	1	Duke, 1992 *
Antiglaucomic	1	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antigonadotropic	1	Jim Duke's personal files.
Antihematuric	1	Duke, 1992 *
Antihemolytic	1	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.
Antihemorrhoidal	1	Duke, 1992 *
Antihepatitic	1	Vlietinck, A.J. and Domisse, R.A. eds. 1985. Advances in Medicinal Plant Research. Wiss. Verlag. Stuttgart.
Antihepatotoxic	2	Duke, 1992 *
Antiherpetic	3	Economic & Medicinal Plant Research, 5: 194.
Antihistaminic	3	Duke, 1992 *
AntiHIV	2	Economic & Medicinal Plant Research, 6: 189.
Antihypercholesterolemic	1	Economic & Medicinal Plant Research, 6: 189.
Antihyperglycemic	1	Duke, 1992 *
Antihypertensive	7	Duke, 1992 *
Antihyperthyroid	1	Duke, 1992 *
Antiimplantation	1	Duke, 1992 *
Antiinflammatory	4	Duke, 1992 *
Antiischemic	2	Duke, 1992 *
AntiLegionella	1	Duke, 1992 *
Antileukemic	7	Duke, 1992 *
Antileukotriene	1	Duke, 1992 *
Antilipoperoxidant	1	Duke, 1992 *

Activity	Chemical Count	Reference
<u>Antilymphocytic</u>	1	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
<u>Antimalarial</u>	2	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> *. Journal of Ethnopharmacology, 15: 201-209, 1986.
<u>Antimelanogenic</u>	1	Duke, 1992 *
<u>Antimelanomic</u>	1	Duke, 1992 *
<u>Antimetastatic</u>	1	Duke, 1992 *
<u>Antimutagenic</u>	4	Duke, 1992 *
<u>Antinephritic</u>	1	Duke, 1992 *
<u>Antinitrosaminic</u>	1	Duke, 1992 *
<u>Antinociceptive</u>	1	Duke, 1992 *
<u>Antioxidant</u>	6	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.
<u>Antiperiodontic</u>	1	Duke, 1992 *
<u>Antiperoxidant</u>	3	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
<u>Antiplaque</u>	1	Duke, 1992 *
<u>Antiplasmodial</u>	1	Rukunga, G. and Simons, A. J. 2006. The Potential of Plants as a Source of Antimalarial Agents - A Review. Africa Herbal Antimalaria Meeting. PlantaPhile Publications, Berlin. 72 pp.
<u>Antiplatelet</u>	1	Duke, 1992 *
<u>Antipolio</u>	1	Jim Duke's personal files.
<u>Antiproliferant</u>	1	Duke, 1992 *

Activity	Chemical Count	Reference
Antiprotozoal	1	Duke, 1992 *
Antipurpuric	1	Duke, 1992 *
Antipyretic	1	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Antiradicular	5	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.
Antisalmonella	1	Duke, 1992 *
Antiseptic	3	Duke, 1992 *
Antiserotonin	1	Duke, 1992 *
Antispasmodic	2	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	1	Duke, 1992 *
Antistreptococcic	1	Duke, 1992 *
Antisunburn	2	Duke, 1992 *
Antithrombogenic	1	Duke, 1992 *
Antithrombotic	1	Duke, 1992 *
Antithyroid	2	Jim Duke's personal files.
Antitrypanosomic	1	<i>Planta Medica</i> , 57: A44, 1991.
Antitumor	4	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Antitumor (Colon)	1	Duke, 1992 *
Antitumor (Forestomach)	1	Duke, 1992 *
Antitumor (Liver)	1	Duke, 1992 *
Antitumor (Skin)	1	Duke, 1992 *

Activity	Chemical Count	Reference
<u>Antitumor-Promoter</u>	3	Duke, 1992 *
<u>Antiulcer</u>	3	Economic & Medicinal Plant Research, 6: 189.
<u>Antivaricose</u>	1	Duke, 1992 *
<u>Antiviral</u>	4	Duke, 1992 *
<u>Apoptotic</u>	2	Duke, 1992 *
<u>Aromatase-Inhibitor</u>	1	Journal of Medicinal Food 2: 235.1999.
<u>Autotoxic</u>	1	Duke, 1992 *
<u>Calcium-Antagonist</u>	4	Duke, 1992 *
<u>Calcium-Blocker</u>	1	Duke, 1992 *
<u>cAMP-Phosphodiesterase-Inhibitor</u>	2	Duke, 1992 *
<u>Cancer-Preventive</u>	5	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.
<u>Capillaroprotective</u>	1	Merck 11th Edition
<u>Carcinogenic</u>	2	Zebovitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. Compendium of Safety Data Sheets for Research and Industrial Chemicals. VCH Publishers, New York. 3560-4253.
<u>Cardiodepressant</u>	2	Iwu, M.M. 1993. Handbook of African Medicinal Plants. CRC Press, Boca Raton, FL 435 pp.
<u>Cardioprotective</u>	1	Duke, 1992 *
<u>Cardiotonic</u>	1	Duke, 1992 *
<u>Catabolic</u>	1	Duke, 1992 *
<u>Chemopreventive</u>	2	Duke, 1992 *
<u>Cholagogue</u>	1	Wichtl, M. 1984. Teedrogen. Ein Handbuch fur Apotheker und Arzte. Wissenschaftliche Verlagsgesellschaft. mbH Stuttgart. 393 pp.
<u>Choleretic</u>	2	Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp.

Activity	Chemical Count	Reference
<u>Choline-Sparing</u>	1	Singleton, V.L. 1981. Naturally Occurring Food Toxicants: Phenolic Substances of Plant Origin Common in Foods. Advances in Food Research 27: 149-217.
<u>Clastogenic</u>	1	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. J. Agric. Food Chem. 38: 805-808.
<u>CNS-Active</u>	1	Wichtl, M. 1984. Teedrogen. Ein Handbuch fur Apotheker und Arzte. Wissenschaftliche Verlagsgesellschaft mbH Stuttgart. 393 pp.
<u>CNS-Depressant</u>	2	Duke, 1992 *
<u>CNS-Stimulant</u>	1	Duke, 1992 *
<u>Collagen-Sparing</u>	1	Duke, 1992 *
<u>Copper-Chelator</u>	1	Duke, 1992 *
<u>COX-2-Inhibitor</u>	1	Duke, 1992 *
<u>Cyclooxygenase-Inhibitor</u>	1	Duke, 1992 *
<u>Cytoprotective</u>	1	Duke, 1992 *
<u>Cytotoxic</u>	2	Duke, 1992 *
<u>Diaphoretic?</u>	1	Lawrence Review of Natural Products, Dec-90.
<u>Diuretic</u>	2	Duke, 1992 *
<u>Dopaminergic</u>	2	Duke, 1992 *
<u>Estrogenic</u>	1	Journal of Medicinal Food 2: 227.1999.
<u>Estrogenic?</u>	1	Economic & Medicinal Plant Research, 6: 189.
<u>Febrifuge</u>	1	Duke, 1992 *
<u>Fungicide</u>	2	Nigg, H.N. and Seigler, D.S., eds. 1992. Phytochemical Resources for Medicine and Agriculture. Plenum Press, New York. 445 pp.
<u>Hemostat</u>	1	Duke, 1992 *

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<u>Hepatomagenic</u>	1	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.
<u>Hepatoprotective</u>	3	Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp.
<u>Hepatotropic</u>	1	Duke, 1992 *
<u>Histamine-Inhibitor</u>	1	Duke, 1992 *
<u>HIV-RT-Inhibitor</u>	1	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.
<u>Hypocholesterolemic</u>	2	Singleton, V.L. 1981. Naturally Occurring Food Toxicants: Phenolic Substances of Plant Origin Common in Foods. Advances in Food Research 27: 149-217.
<u>Hypoglycemic</u>	2	Duke, 1992 *
<u>Hypotensive</u>	6	Duke, 1992 *
<u>ICAM-1-Inhibitor</u>	1	Duke, 1992 *
<u>Immunomodulator</u>	1	Duke, 1992 *
<u>Immunostimulant</u>	5	Duke, 1992 *
<u>iNOS-Inhibitor</u>	1	Duke, 1992 *
<u>Inotropic</u>	1	Duke, 1992 *
<u>Insecticide</u>	1	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.
<u>Insectifuge</u>	1	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.

Activity	Chemical Count	Reference
<u>Insectiphile</u>	2	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
<u>Insulinogenic</u>	1	Economic & Medicinal Plant Research, 6: 170.
<u>Interferonogenic</u>	1	Economic & Medicinal Plant Research, 1: 124.
<u>Interleukin-1-alpha-Inhibitor</u>	1	Duke, 1992 *
<u>Interleukin-6-mRNA-Inhibitor</u>	1	Duke, 1992 *
<u>Iodothyronine-Deiodinase-Inhibitor</u>	1	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
<u>JNK-Inhibitor</u>	1	Duke, 1992 *
<u>Juvabional</u>	2	Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990.
<u>Larvistat</u>	2	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
<u>Leukotriene-Inhibitor</u>	1	Duke, 1992 *
<u>Lipoxygenase-Inhibitor</u>	4	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.
<u>MAO-Inhibitor</u>	1	Duke, 1992 *
<u>Metal-Chelator</u>	1	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.
<u>Mutagenic</u>	2	Duke, 1992 *
<u>Myocontractant</u>	3	Duke, 1992 *
<u>Myoprotective</u>	1	Duke, 1992 *
<u>Myorelaxant</u>	2	Duke, 1992 *
<u>Natriuretic</u>	1	Duke, 1992 *

Activity	Chemical Count	Reference
<u>Nematicide</u>	1	Shoyakugaku Zasshi, 44: 183.
<u>Neuroparalytic</u>	1	Duke, 1992 *
<u>Neuroprotective</u>	4	Duke, 1992 *
<u>NO-Genic</u>	1	Duke, 1992 *
<u>NO-Inhibitor</u>	2	Duke, 1992 *
<u>Ornithine-Decarboxylase-Inhibitor</u>	1	Hagerman, A.E. Tannin-Protein Interactions. Phenolic Compounds in Food and Their Effects on Health, Ch.19.
<u>Oviposition-Stimulant</u>	2	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
<u>PAF-Inhibitor</u>	2	Duke, 1992 *
<u>Pancreatogenic</u>	1	Duke, 1992 *
<u>Perfumery</u>	1	Zebowitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. Compendium of Safety Data Sheets for Research and Industrial Chemicals. VCH Publishers, New York. 3560-4253.
<u>Peroxynitrite-Scavenger</u>	1	Duke, 1992 *
<u>Pesticide</u>	6	Duke, 1992 *
<u>Phagocytotic</u>	4	Duke, 1992 *
<u>Propecic</u>	1	Duke, 1992 *
<u>Protisticide</u>	4	Meckes, M., Calzada, F., Tapia-Contreras, A., Cedillo-Rivera, R. 1999. Antiprotozoal Properties of <i>Helianthemum glomeratum</i> . Phytotherapy Research, 13(2): 102-105.
<u>Quinone-Reductase-Inducer</u>	1	Duke, 1992 *
<u>Radioprotective</u>	1	Duke, 1992 *
<u>Sedative</u>	2	Duke, 1992 *
<u>Serotonergic</u>	1	Duke, 1992 *
<u>Sunscreen</u>	2	Duke, 1992 *

Activity	Chemical Count	Reference
<u>Sweetener</u>	1	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
<u>Teratologic</u>	1	Duke, 1992 *
<u>TNF-alpha-Inhibitor</u>	2	Duke, 1992 *
<u>Topoisomerase-I-Inhibitor</u>	1	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.
<u>Topoisomerase-II-Inhibitor</u>	2	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.
<u>Toxic</u>	1	Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp.
<u>Tumorigenic</u>	1	Zebovitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. <i>Compendium of Safety Data Sheets for Research and Industrial Chemicals</i> . VCH Publishers, New York. 3560-4253.
<u>Tyrosinase-Inhibitor</u>	1	Duke, 1992 *
<u>Uterotonic</u>	1	Duke, 1992 *
<u>Uterotrophic</u>	1	<i>Journal of Medicinal Food</i> 2: 227.1999.
<u>Vasodilator</u>	7	Duke, 1992 *
<u>Vasopressor</u>	1	Duke, 1992 *
<u>Vulnerary</u>	1	Duke, 1992 *
<u>Xanthine-Oxidase-Inhibitor</u>	1	Duke, 1992 *