

**Dr. Duke's Phytochemical and Ethnobotanical Database****Biological Activities Found in *Helianthus annuus***

<b>Activity</b>	<b>Chemical Count</b>
(-)-Chronotropic	3
(-)-Inotropic	3
11B-HSD-Inhibitor	1
5-Alpha-Reductase-Inhibitor	5
5-HETE-Inhibitor	1
5-Lipoxygenase-Inhibitor	1
Abortifacient	1
Acaricide	6
Acarifuge	1
ACE-Inhibitor	4
Acetylcholinergic	1
AChE-Inhibitor	1
Acidifier	1
Acidulant	2
Acnegenic	1
Additive	2
Aggregant	1
Aldehyde-Oxidase-Inhibitor	1

<b>Activity</b>	<b>Chemical Count</b>
Aldose-Reductase-Inhibitor	13
Allelochemic	9
Allelopathic	9
Allergenic	21
Alpha-Amylase-Inhibitor	1
Alpha-Reductase-Inhibitor	1
Amebicide	1
Analgesic	18
Anaphrodisiac	1
Androgenic	1
Androgenic?	1
Anemiagenic	2
Anesthetic	9
Angiogenic	1
Angiotensin-Receptor-Blocker	2
Anorexic	1
Ant-Repellent	1
Anthelmintic	3
Antiacetylcholine	1
Antiacetylcholinesterase	8

<b>Activity</b>	<b>Chemical Count</b>
Antiacid	1
Antiacne	8
Antiacrodermatitic	1
Antiacrodynic	1
AntiADD	1
AntiAddisonian	1
Antiadenomic	2
Antiadenoviral	1
Antiadrenergic	1
Antiaflatoxin	2
Antiaggregant	11
Antiaging	4
Antiakathisic	1
Antialcoholic	5
Antialdosteronic	1
Antialkalotic	1
Antiallergenic	1
Antiallergic	11
Antialopecic	4
Antialzheimeran	9

<b>Activity</b>	<b>Chemical Count</b>
Antialzheimeran?	1
Antiamblyopic	1
Antianaphylactic	4
Antiandrogenic	4
Antianemic	4
Antianginal	4
Antiangiogenic	3
Antianorectic	2
Antianorexic	1
Antianxiety	3
Antiaphthic	1
Antiarabiflavinotic	1
Antiarachidonate	1
Antiarrhythmic	6
Antiarteriosclerotic	3
Antiarthritic	11
Antiasthmatic	7
Antiataxic	1
Antiatherogenic	1
Antiatheromic	1

<b>Activity</b>	<b>Chemical Count</b>
Antiatherosclerotic	11
Antibacillary	1
Antibacillus	1
Antibackache	1
Antibacterial	33
Antiberiberi	1
Antibiotic	2
AntiBPH	1
Antibronchitic	5
Antibronchoconstrictor	1
Anticalculic	1
Anticancer	12
Anticancer (Breast)	3
Anticancer (Cervix)	1
Anticancer (Colon)	2
Anticancer (Forestomach)	2
Anticancer (Liver)	2
Anticancer (Lung)	1
Anticancer (Skin)	2
Anticanker	3

<b>Activity</b>	<b>Chemical Count</b>
Anticarcinogenic	3
Anticarcinomic	2
Anticarcinomic (Breast)	1
Anticardiospasmic	1
Anticariogenic	7
Anticarpal-Tunnel	1
Anticataract	9
Anticatarrh	2
Anticephalagic	2
Anticervicaldysplasic	2
AntiCFS	1
Anticheilitic	2
Antichilblain	2
Anticholinergic	1
Anticholinesterase	2
Antichorea	1
Antichoreic	2
Anticirrhotic	2
Anticlastogen	1
Anticlimacteric	2

<b>Activity</b>	<b>Chemical Count</b>
Anticoagulant	1
Anticoeliac	1
Anticold	1
Anticolic	1
Anticolitic	3
Anticomplement	1
Anticomplementary	1
Anticonvulsant	7
Anticoronary	6
AntiCorpus-Luteum	1
AntiCrohn's	2
AntiCRP	1
Anticystinuric	1
Anticystitic	1
Anticytotoxic	1
Antidandruff	3
Antidecubitic	3
Antideliriant	1
Antidementia	8
Antidepressant	8

<b>Activity</b>	<b>Chemical Count</b>
Antidepressant?	1
Antidermatitic	4
Antidiabetic	15
Antidiabetic?	1
Antidiarrheic	3
Antidiscotic	1
Antidote (Acetaminophen)	1
Antidote (Aluminum)	1
Antidote (Cadmium)	1
Antidote (Hypoglycin-A)	1
Antidote (Lead)	1
Antidote (Paracetamol)	1
Antidrepanocytic	1
Antidysenteric	1
Antidysgeuzic	1
Antidyskinetic	4
Antidysmenorrheic	3
Antidyspeptic	1
Antidysphagic	1
AntiEBV	2



<b>Activity</b>	<b>Chemical Count</b>
Antieczemic	5
Antiedemic	13
Antielastase	2
Antiemetic	1
Antiencephalitic	2
Antiencephalopathic	7
Antiencephalopathic?	1
Antiendometriotic	1
Antienteritic	1
Antienterotic	1
Antiepileptic	4
Antiepitheleomic	1
Antiescherichic	5
Antiesophagitic	1
Antiestrogenic	5
Antifatigue	6
Antifeedant	14
Antifertility	4
Antifibrinolytic	2
Antifibromyalgic	2

<b>Activity</b>	<b>Chemical Count</b>
Antifibrosarcomic	1
Antifibrositic	2
Antifibrotic	1
Antiflu	7
Antifuruncular	1
Antigallstone	1
Antigastric	1
Antigastritic	3
Antigastrotic	1
Antigenotoxic	2
Antigingivitic	1
Antiglaucomic	1
Antiglossitic	1
Antiglutamaergic	1
Antiglycosation	1
Antigoiter	1
Antigonadotrophic	1
Antigonadotropic	3
Antigranular	1
Antigrey	1

<b>Activity</b>	<b>Chemical Count</b>
AntiGTF	1
Antihalitosis	3
Antihangover	4
Antiheartburn	1
Antihelicobacter	2
Antihemolytic	2
Antihemorrhagic	1
Antihepatitic	1
Antihepatoadenomic	1
Antihepatocarcinogenic	1
Antihepatotoxic	1
Antihepatotoxic	12
Antiherpetic	10
Antiherpetic?	1
Antihiccup	1
Antihistaminic	8
AntiHIV	7
Antihomocysteine	1
Antihydrophobic	1
Antihyperactivity	1

<b>Activity</b>	<b>Chemical Count</b>
Antihypercholesterolemic	2
Antihyperglycemic	1
Antihyperkeratotic	1
Antihyperkinetic	2
Antihyperlipidemic	1
Antihyperlipoproteinaemic	1
Antihypertensive	7
Antihyperthyroid	2
Antihypoglycemic	1
Antiichthyotic	1
Antiimplantation	1
Antiimpotence	2
Antiinfarctal	1
Antiinfective	1
Antiinfertility	4
Antiinflammatory	37
Antiinsomniac	4
Antiinsomnic	1
Antiischemic	4
Antikeratitic	2

<b>Activity</b>	<b>Chemical Count</b>
Antikeratotic	1
Antiketotic	2
Antilactobacillic	1
Antilaryngitic	2
AntiLegionella	2
Antileishmanic	3
Antileptic	1
Antileukemic	9
Antileukonychic	1
Antileukoplakic	1
Antileukorrhic	1
Antileukotriene	5
Antileukotriene-D4	3
Antileukotrienogenic	1
Antilipoperoxidant	2
Antilisteria	2
Antilithic	6
Antilithic?	1
Antilupus	2
AntiLyme	4

<b>Activity</b>	<b>Chemical Count</b>
Antilymphomic	4
Antimaculitic	5
Antimalarial	5
Antimange	1
Antimanic	4
Antimastalgic	2
Antimastitic	1
AntiMD	1
Antimelanogenic	2
Antimelanomic	2
AntiMeniere's	2
Antimenopausal	3
Antimenorrhagic	2
Antimetastatic	3
Antimetastatic (Stomach)	1
Antimigraine	5
Antimite	1
Antimitotic	2
Antimitral-valve-prolapse	1
Antimorphinic	1

<b>Activity</b>	<b>Chemical Count</b>
Antimorphinistic	1
AntiMS	4
Antimutagenic	18
Antimyocarditic	2
Antimyoclonic	1
Antinauseant	1
Antineoplastic	1
Antinephritic	2
Antinephrolytic	1
Antineuralgic	4
Antineurasthenic	1
Antineuritic	2
Antineuropathic	4
Antineurotic	1
Antinitrosaminic	8
Antinitrosating	1
Antinociceptive	8
Antinyctalopic	2
Antiobesity	5
Antiodontalgic	1

<b>Activity</b>	<b>Chemical Count</b>
Antiophidic	3
Antiophthalmic	3
Antiosteoarthritic	2
Antiosteoporotic	6
Antiotitic	1
Antiototic	1
Antioxalate	1
Antioxidant	47
Antioxidant Synergist	5
Antioxidant?	2
Antiozenic	1
AntiPAF	1
Antipancreatic	1
Antipapillomic	1
Antiparkinsonian	7
Antipellagic	3
Antiperiodontal	1
Antiperiodontic	1
Antiperiodontitic	2
Antiperistaltic	1



<b>Activity</b>	<b>Chemical Count</b>
Antipermeability	1
Antiperoxidant	8
Antiperoxyinitrite	1
AntiPGE2	1
Antipharyngitic	3
Antiphenylketonuric	2
Antiphotophobic	2
Antipityriasic	1
Antiplateau	6
Antiplasmodial	4
AntiPMS	6
Antipneumonic	1
Antipodriac	1
Antipolio	3
Antipoliomyelitic	1
Antipolyneuritic	1
Antiporphyrin	1
Antiprogestational	1
Antiprogestosterone	1
Antiprolactin	1

<b>Activity</b>	<b>Chemical Count</b>
Antiproliferant	8
Antiprostaglandin	7
Antiprostanoid	1
Antiprostataadenomic	1
Antiprostatitic	5
Antiprostatotic	1
Antipruritic	3
Antipsoriac	4
Antipsychotic	1
Antipyretic	5
Antirabies	1
Antiradicular	14
AntiRaynaud's	2
Antiretinitic Optometry	1
Antiretinopathic	1
Antiretinopathic?	1
Antiretinotic	1
Antirheumatalgic	1
Antirheumatic	11
Antirhinitic	2

<b>Activity</b>	<b>Chemical Count</b>
Antisalmonella	3
Antisarcotic	1
Antisclerodermic	1
Antiscoliotic	1
Antiscotomic	1
Antiseborrheic	4
Antisenility	1
Antiseptic	27
Antiserotonin	1
Antishock	2
Antisickling	5
Antisinusitic	3
Antispare-Tire	1
Antispasmodic	26
Antispasmophilic	1
Antispermatogetic	1
Antisprue	1
Antistaphylococcic	8
Antisteatotic	1
Antisterility	1

<b>Activity</b>	<b>Chemical Count</b>
Antistomatitic	3
Antistreptococcic	2
Antistress	3
Antistroke	4
Antisunburn	3
Antisyndrome-X	4
Antitartar	1
Antitestosterone	1
AntiTGF-beta	1
Antithalassemic	1
Antithiamin	2
Antithrombic	2
Antithrombotic	1
Antithromboxane	1
Antithromboxane-B2	1
Antithyroid	2
Antithyrototoxic	1
Antitic	1
Antitinnitic	1
AntiTNF	1

<b>Activity</b>	<b>Chemical Count</b>
AntiTourette's	1
Antitoxemic	1
Antitriglyceride	1
Antitrypanosomic	3
Antitubercular	2
Antitumor	32
Antitumor (Bladder)	2
Antitumor (Breast)	7
Antitumor (Cervix)	1
Antitumor (CNS)	1
Antitumor (Colon)	9
Antitumor (Colorectal)	1
Antitumor (Forestomach)	2
Antitumor (Kidney)	1
Antitumor (Liver)	3
Antitumor (Lung)	5
Antitumor (Ovary)	1
Antitumor (Pancreas)	2
Antitumor (Prostate)	5
Antitumor (Skin)	5

<b>Activity</b>	<b>Chemical Count</b>
Antitumor (Stomach)	4
Antitumor-Promoter	7
Antitussive	3
Antiulcer	20
Antiulcerogenic	2
Antiuremic	1
Antiurethrotic	1
Antiuricosuric	1
Antivaccinia	1
Antivaginitic	2
Antivaricose	1
Antivertigo	1
Antiviral	19
Antiviral?	1
Antivitaligic	1
Antivulvitic	1
Antixerophthalmic	1
Antixerotic	1
Antiyeast	2
Anxiolytic	5

<b>Activity</b>	<b>Chemical Count</b>
Aphrodisiac	1
Apifuge	1
Apoptotic	8
Aromatase-Inhibitor	1
Artemicide	2
Arteriodilator	1
Astringent	1
Atherogenic	1
ATPase-Inhibitor	1
Autotoxic	1
Avicide	1
Bacteristat	4
Barbituate-Synergist	2
Beta-Blocker	3
Beta-Glucuronidase-Inhibitor	1
Bradycardiac	1
Bradycardic	1
Bronchoconstrictor	1
Bronchomucolytic	1
Bronchomucotropic	1

<b>Activity</b>	<b>Chemical Count</b>
Bronchoprotectant	1
Bronchorelaxant	3
Bronchorrheic	1
Bronchostimulant	1
Bruchifuge	1
Bruchiphobe	2
Calcium-Antagonist	7
Calcium-Channel-Blocker	1
Calmodulin-Antagonist	1
cAMP-Phosphodiesterase-Inhibitor	1
Cancer-Preventive	45
Candidicide	10
Candidistat	2
Capillariprotective	1
Carcinogenic	8
Carcinogenic?	1
Cardiac	1
Cardiodepressant	1
Cardioprotective	10
Cardiotonic	1



<b>Activity</b>	<b>Chemical Count</b>
Cardiotoxic	1
Cardiovascular	1
Carminative	4
Caspase-3-Inducer	1
Caspase-8-Inducer	1
Catabolic	1
Cerebroprotective	1
Cerebrotonic	1
Chelator	1
Chemopreventive	8
Cholagogue	4
Choleretic	15
Cholesterolytic	1
Cholinergic	2
Cicatrizant	1
Ciliotoxic	1
Circulatory-Stimulant	1
Circulotonic	3
Clastogenic	2
CNS-Active	2

<b>Activity</b>	<b>Chemical Count</b>
CNS-Depressant	5
CNS-Stimulant	7
CNS-Toxic	1
Co-carcinogenic	1
Coleopterifuge	1
Coleoptophile	1
Collagen-Sparing	2
Collagenic	1
Collyrium	1
Colorant	4
Comedogenic	1
Comedolytic	1
COMT-Inhibitor	1
Congestant	1
Contraceptive	1
Contraceptive (Male)	1
Convulsant	4
Copper-Antagonist	1
Copper-Chelator	1
Cosmetic	5

Activity	Chemical Count
Counterirritant	5
COX-1-Inhibitor	2
COX-2-Inhibitor	5
Culicide	1
Cyclooxygenase-Inhibitor	4
Cytochrome-P450-1A2-Inhibitor	1
Cytochrome-P450-Inducer	2
Cytochrome-P450-Inhibitor	1
Cytoprotective	1
Cytotoxic	11
Decongestant	3
Decongestant?	1
Degranulant	2
Deiodinase-Inhibitor	1
Deliriant	1
Demulcent	2
Dentifrice	2
Deodorant	1
Dermatitigenic	6
Detoxicant	2

<b>Activity</b>	<b>Chemical Count</b>
Detoxicant (Alcohol)	1
Diaphoretic	1
Diaphoretic?	2
Differentiator	1
Disinfectant	1
Diuretic	9
DNA-Active	1
DNA-Protective	1
Dye	1
Ecbolic	1
Edemagenic	2
Elastase-Inhibitor	1
Emetic	2
Emmenagogue	1
Enterocontractant	1
Enterorelaxant	2
Epileptigenic	1
Ergogenic	1
Essential	8
Estrogenic	5

<b>Activity</b>	<b>Chemical Count</b>
Expectorant	9
Febrifuge	1
Fibrinolytic	1
Flatugenic	3
FLavor	30
FPTase-Inhibitor	1
Fungicide	23
Fungiphilic	1
Fungistat	2
GABA-nergic	1
Gastroprotective	5
Gastrosedative	1
Gastrostimulant	1
Glaucomagenic	1
Glucosyl-Transferase-Inhibitor	1
Glutathionergic	1
Glutathionigenic	2
Goitrogenic	1
Gonadotrophic	1
Gram(+)-icide	2

<b>Activity</b>	<b>Chemical Count</b>
Gram(-)-icide	2
GST-Inducer	1
Hemolytic	2
Hemopoietic	1
Hemostat	5
Hepatocarcinogenic	1
Hepatomagenic	1
Hepatoprotective	17
Hepatotonic	2
Hepatotoxic	2
Hepatotropic	2
Herbicide	15
Histamine-Inhibitor	2
Histaminic	2
HIV-RT-Inhibitor	1
Hydrocholerectic	1
Hypercholesterolemic	3
Hyperglycemic	2
Hypertensive	1
Hyperthyroid	1

<b>Activity</b>	<b>Chemical Count</b>
Hypnotic	2
Hypoammonemic	1
Hypoarginanemic	1
Hypocalcemic	1
Hypocholesterolemic	21
Hypocholesterolemic?	1
Hypoglycemic	11
Hypokalemic	1
Hypolipemic	1
Hypolipidemic	4
Hypotensive	14
Hypothermic	2
Hypouricemic	1
Ileorelaxant	2
Immunomodulator	8
Immunostimulant	9
Immunosuppressant	3
Inflammatory	2
Inhalant	1
iNOS-Inhibitor	1

<b>Activity</b>	<b>Chemical Count</b>
Inotropic	1
Insect-Repellent	2
Insecticide	6
Insectifuge	23
Insectifuge?	1
Insectiphile	1
Insulin-Sparing	1
Insulinase-Inhibitor	1
Insulinogenic	3
Insulinotonic	1
Interferon-Synergist	1
Interferonogenic	2
Interleukin-6-Inhibitor	2
Irritant	20
Juvabional	7
Keratolytic	2
Larvicide	5
Larvostat	2
Laxative	8
Laxative?	2



<b>Activity</b>	<b>Chemical Count</b>
Leptingenic	1
Leucocytogenic	1
Leukotriene-Inhibitor	2
Libidolytic	1
Lipolytic	1
Lipotropic	3
Lipoxygenase-Inhibitor	8
Litholytic	2
Lubricant	3
Lyase-Inhibitor	1
MAO-A-Inhibitor	1
MAO-Inhibitor	2
Mast-Cell-Stabilizer	1
Memorigenic	1
Memory-Enhancer	1
Metal-Chelator	3
Metal-Chelator (Copper)	1
Metalloproteinase-Inhibitor	1
Metastatic	1
MMP-9-Inhibitor	1

<b>Activity</b>	<b>Chemical Count</b>
Monoamine-Precursor	3
Mosquitocide	1
Mosquitofuge	2
Motor-Depressant	4
Mucogenic	2
Musculotropic	1
Mutagenic	4
Mycobactericide	2
Myorelaxant	9
Myostimulant	1
NADH-Oxidase-Inhibitor	1
Natriuretic	1
Nematicide	13
Nematistat	1
Neoplastic	1
NEP-Inhibitor	1
Neurodepressant	1
Neuroexcitant	1
Neuroinhibitor	1
Neuropathogenic	1

<b>Activity</b>	<b>Chemical Count</b>
Neuroprotective	2
Neurotoxic	3
Neurotransmitter	1
NF-kB-Inhibitor	4
NO-Genic	3
NO-Inhibitor	4
NO-Synthase-Inhibitor	1
Nociceptive	1
Occuloirritant	1
Odontolytic	1
Ophthalmic-Antialkali	1
Ornithine-Decarboxylase-Inhibitor	6
Osteogenic	1
Oviposition-Stimulant	1
Ovulant	1
Oxidant	2
Ozone-Scavenger	1
P21-Inducer	1
P450-2B1-Inhibitor	4
P450-Inducer	4

<b>Activity</b>	<b>Chemical Count</b>
P450-Inhibitor	1
Paralytic	1
Parasiticide	1
Parasympathomimetic	1
Pediculicide	2
Percutaneostimulant	2
Perfume	2
Perfumery	24
Peristaltic	2
Peroxidase-Inhibitor	1
Pesticide	59
PGE2-Inhibitor	1
Phagocytotic	3
Phospholipase-A2-Inhibitor	1
Phospholipase-Inhibitor	1
Photosensitizer	1
Phytoalexin	2
Phytohormonal	3
Pigment	1
Piscicide	1

<b>Activity</b>	<b>Chemical Count</b>
Pituitary-Stimulant	1
PKC-Inhibitor	1
Plasmodicide	1
Preservative	2
Prolactinogenic	1
Proliferant	1
Prooxidant	5
Propepic	4
Prostaglandigenic	5
Prostaglandin-Synthesis-Inhibitor	6
Prostatitigenic	1
Protein-Kinase-C-Inhibitor	2
Protisticide	1
PTK-Inhibitor	1
Quinone-Reductase-Inducer	2
Quinone-Reductase-Inhibitor	1
Radioprotective	1
Refrigerant	2
Respirainhibitor	1
Respirastimulant	1

<b>Activity</b>	<b>Chemical Count</b>
Retinoprotectant Optometry	1
Roborant	1
Rubefacient	4
Scabicide	1
Schizophrenigenic	1
Secretagogue	4
Sedative	16
Sequestrant	1
Serotoninerpic	2
Sialogogue	1
Soap	2
Spasmogenic	7
Spermicide	2
Spermigenic	2
Stimulant	1
Sunscreen	4
Suppository	1
Surfactant	2
Sweetener	5
Tachycardic	1

<b>Activity</b>	<b>Chemical Count</b>
Teratogenic	1
Teratologic	1
Termiticide	4
Termitifuge	1
Testosterone-Hydroxylase-Inducer	2
Testosteronigenic	1
Thymoprotective	1
Thyrotropic	1
TNF-alpha-Inhibitor	1
TOPO-2-Inhibitor	1
Topoisomerase-I-Inhibitor	1
Topoisomerase-II-Inhibitor	2
Toxic	3
Tranquilizer	4
Transdermal	8
Tremorigenic	1
Trichomonicide	7
Trichomonistat	1
Triglycerigenic	1
Trypanocide	1

<b>Activity</b>	<b>Chemical Count</b>
Trypsin-Enhancer	2
Tumor-Promoter	2
Tumorigenic	3
Tyrosinase-Inhibitor	4
Tyrosine-Kinase-Inhibitor	2
Ubiquiot	7
Ulcerogenic	3
Uricogenic	1
Uricosuric	2
Urine-Acidifier	1
Urine-Deodorant	1
Uterorelaxant	1
Uterosedative	2
Uterotonic	2
Varroacide	1
Vasodilator	10
Vasopressor	1
Vasorelaxant	1
VEGF-Inhibitor	1
Vermifuge	2



<b>Activity</b>	<b>Chemical Count</b>
Verrucolytic	1
Vibriocide	2
Vitamin-A-Activity	1
Vulnerary	6
Xanthine-Oxidase-Inhibitor	2