

**Dr. Duke's Phytochemical and Ethnobotanical Database****Biological Activities Found in Echinacea spp**

<b>Activity</b>	<b>Chemical Count</b>
(-)-Chronotropic	2
(-)-Inotropic	2
11B-HSD-Inhibitor	3
5-Alpha-Reductase-Inhibitor	1
5-HT-Inhibitor	1
5-Lipoxygenase-Inhibitor	2
Abortifacient	1
Acaricide	1
ACE-Inhibitor	2
AChE-Inhibitor	1
Acidulant	1
Aedifuge	1
Alcohol-Dehydrogenase-Inhibitor	1
Aldehyde-Oxidase-Inhibitor	2
Aldose-Reductase-Inhibitor	11
Allelochemic	7
Allelopathic	1
Allergenic	11

<b>Activity</b>	<b>Chemical Count</b>
Amphiglycemic?	1
Analgesic	12
Androgenic	1
Androgenic?	1
Angiogenic	1
Angiotensin-Receptor-Blocker	3
Anorexic	2
Antiacetylcholine	1
Antiacetylcholinesterase	1
Antiacne	7
Antiacrodermatitic	1
Antiacrodynic	1
AntiADD	1
Antiadenomic	2
Antiadenoviral	1
Antiaflatoxin	3
AntiAGE	2
Antiaggregant	10
Antiaging	6
Antiakathisic	1

<b>Activity</b>	<b>Chemical Count</b>
Antialcoholic	4
Antiallergic	9
Antialopecic	2
Antialzheimeran	5
Antialzheimeran?	1
Antiamblyopic	1
Antianaphylactic	1
Antiandrogenic	2
Antianemic	3
Antianginal	2
Antiangiogenic	5
Antianorectic	2
Antianorexic	1
Antianxiety	2
Antiapoplectic	1
Antiarabiflavinotic	1
Antiarrhythmic	5
Antiarteriosclerotic	1
Antiarthritic	8
Antiasthmatic	7

<b>Activity</b>	<b>Chemical Count</b>
Antiatherogenic	3
Antiatherosclerotic	8
Antibackache	1
Antibacterial	22
Antiberiberi	1
AntiBPH	1
Antibronchitic	1
Anticancer	6
Anticancer (Breast)	1
Anticancer (Cervix)	1
Anticancer (Colon)	2
Anticancer (Forestomach)	2
Anticancer (Liver)	2
Anticancer (Lung)	2
Anticancer (Skin)	2
Anticanker	3
Anticapillary-Fragility	2
Anticarcinogenic	4
Anticarcinomic	2
Anticarcinomic (Breast)	1

<b>Activity</b>	<b>Chemical Count</b>
Anticardiospasmic	1
Anticariogenic	2
Anticarpal-Tunnel	1
Anticataract	9
Anticephalagic	2
Anticervicaldysplasic	3
AntiCFS	3
Anticheilitic	2
Antichilblain	1
Anticirrhotic	1
Anticlastogen	1
Anticlimacteric	4
Anticoeliac	1
Anticold	2
Anticolitic	3
Anticolitic?	1
Anticomplementary	4
Anticonvulsant	4
Anticorneotic	1
Anticoronary	4

<b>Activity</b>	<b>Chemical Count</b>
AntiCrohn's	3
AntiCTS	1
AntiCVI	1
Anticystitic	1
Antidandruff	2
Antidecubitic	3
Antideliriant	1
Antidementia	5
Antidepressant	7
Antidermatic	2
Antidermatitic	5
Antidiabetic	11
Antidiarrheic	1
Antidiscotic	1
Antidote (Aluminum)	2
Antidote (Cadmium)	2
Antidote (Lead)	3
Antidote (Mercury)	1
Antidote (Paraquat)	1
Antidrepanocytic	1

<b>Activity</b>	<b>Chemical Count</b>
Antidysgeuzic	1
Antidyskinetic	1
Antidysmenorrhic	2
Antidyspeptic	2
Antidysphagic	1
AntiEBV	1
Antieczemic	2
Antiedemic	5
Antielastase	2
Antiencephalitic	2
Antiencephalopathic	2
Antiendometriotic	2
Antienterotic	1
Antiepileptic	4
Antierythemic	1
Antiescherichic	4
Antiesophagitic	1
Antiestrogenic	5
Antifatigue	5
Antifeedant	12

<b>Activity</b>	<b>Chemical Count</b>
Antifertility	2
Antifibrinolytic	1
Antifibromyalgic	1
Antifibrosarcomic	1
Antifibrotic	3
Antiflu	6
Antifuruncular	1
Antigallstone	1
Antigastric	1
Antigastritic	3
Antigastrotic	1
Antigenotoxic	1
Antigingivitic	2
Antiglaucomic	3
Antiglossitic	1
Antiglycosuric	1
Antigonadotrophic	1
Antigonadotropic	3
Antigout	1
AntiGTF	1



<b>Activity</b>	<b>Chemical Count</b>
Antihangover	4
Antiheartburn	1
Antihematuric	1
Antihemolytic	4
Antihemorrhagic	1
Antihemorrhoidal	1
Antihepatitic	1
Antihepatoadenomic	1
Antihepatotoxic	9
Antiherpetic	11
Antiherpetic?	1
Antihistaminic	9
AntiHIV	9
AntiHIV-Integrase	1
Antihomocystinuric	1
Antihydrophobic	1
Antihyperactivity	1
Antihypercholesterolemic	2
Antihyperkeratotic	1
Antihyperkinetic	2

<b>Activity</b>	<b>Chemical Count</b>
Antihyperlipoproteinaemic	1
Antihypertensive	8
Antihyperthyroid	2
Antihypoglycemic	1
Antiichthyotic	1
Antiimplantation	1
Antiimpotence	1
Antiinfective	1
Antiinfertility	2
Antiinflammatory	19
Antiinsomniac	3
Antiinsomnic	1
Antikeratitic	1
Antikeshan	1
Antilactobacillic	1
AntiLegionella	2
Antileishmanic	3
Antileptic	2
Antileukemic	9
Antileukonychic	1

<b>Activity</b>	<b>Chemical Count</b>
Antileukoplakic	1
Antileukotriene	4
Antilipolytic	1
Antilipoperoxidant	2
Antilisteria	1
Antilithic	3
Antilupus	1
AntiLyme	5
Antilymphocytic	1
Antilymphomic	4
Antimaculitic	4
Antimalarial	3
Antimastalgic	1
Antimastitic	1
Antimeasles	1
Antimelanogenic	2
Antimelanomic	5
AntiMeniere's	1
Antimenopausal	4
Antimenorrhagic	1

<b>Activity</b>	<b>Chemical Count</b>
Antimetastatic	5
Antimetastatic (Stomach)	1
Antimigraine	4
Antimitotic	1
Antimitral-valve-prolapse	1
AntiMS	1
Antimutagenic	14
Antimyalgic	1
Antimyotrophic	1
Antimyocarditic	2
Antineoplastic	1
Antinephritic	1
Antinephrolytic	1
Antineuralgic	2
Antineuramidase	1
Antineurasthenic	1
Antineuritic	1
Antineuropathic	2
Antineurotic	1
AntiNF-kB	1

<b>Activity</b>	<b>Chemical Count</b>
Antinitrosaminic	5
Antinitrosic	1
Antinociceptive	5
Antinyctalopic	1
Antiobesity	6
Antiobesity?	1
Antionychyotic	2
Antiophidic	3
Antiorchitic	1
Antiosteoarthritic	2
Antiosteoporotic	7
Antiosteoporotic?	1
Antiotitic	2
Antiototic	1
Antioxidant	22
Antiozenic	1
Antipancreatitic	1
Antipapillomic	1
Antiparkinsonian	3
Antiparotitic	1

<b>Activity</b>	<b>Chemical Count</b>
Antipellagic	2
Antiperiodontal	1
Antiperiodontic	1
Antiperiodontitic	3
Antiperistaltic	2
Antipermeability	1
Antiperoxidant	4
Antipharyngitic	1
Antiphotophobic	2
Antipityriasic	1
Antiplatelet	4
Antiplasmodial	2
Antiplatelet	1
AntiPMS	5
Antipneumonic	2
Antipodriac	2
Antipolio	4
Antipoliomyelitic	2
Antiporphyrin	1
Antiprogestational	1

<b>Activity</b>	<b>Chemical Count</b>
Antiprolactin	1
Antiproliferant	8
Antiprostaglandin	2
Antiprostanoid	1
Antiprostataadenomic	1
Antiprostatitic	3
Antiprotozoal	1
Antipsoriac	2
Antipurpuric	1
Antipyretic	3
Antiradicular	13
AntiRaynaud's	3
Antiretinopathic	1
Antiretinotic	1
Antirheumatic	5
Antirhinitic	1
Antisalmonella	1
Antiscorbutic	1
Antiscotomic	1
Antiseptic	10

<b>Activity</b>	<b>Chemical Count</b>
Antiserotonin	2
Antishingles	1
Antisickling	1
Antisilicotic	1
Antispare-Tire	1
Antispasmodic	18
Antispasmophilic	1
Antistaph	2
Antistaphylococcic	6
Antistomatitic	4
Antistreptococcic	3
Antistress	5
Antistroke	2
Antisunburn	6
Antisyndrome-X	6
Antithiamin	2
Antithrombic	2
Antithrombogenic	1
Antithyroid	4
Antitic	1



<b>Activity</b>	<b>Chemical Count</b>
Antitinnitic	1
Antitriglyceride	2
Antitrypanosomic	2
Antitumor	15
Antitumor (Bladder)	1
Antitumor (brain)	2
Antitumor (Breast)	6
Antitumor (Cervix)	1
Antitumor (CNS)	1
Antitumor (Colon)	6
Antitumor (Forestomach)	2
Antitumor (Gastric)	1
Antitumor (Kidney)	1
Antitumor (Liver)	2
Antitumor (Lung)	7
Antitumor (Ovary)	2
Antitumor (Pancreas)	2
Antitumor (Prostate)	3
Antitumor (Skin)	6
Antitumor (Stomach)	3

<b>Activity</b>	<b>Chemical Count</b>
Antitumor (Thyroid)	1
Antitumor-Promoter	7
Antitussive	1
Antiulcer	9
Antiulcerogenic	2
Antivaccinia	1
Antivaginitic	1
Antivaricose	1
Antivertigo	1
Antiviral	19
Antiviral?	1
Antixerophthalmic	1
Antiyeast	2
Anxiolytic	7
AP-1-Inhibitor	1
Aphidifuge	1
Apoptotic	9
Aromatase-Inhibitor	3
Artemicide	2
Arteriodilator	1

<b>Activity</b>	<b>Chemical Count</b>
Asthma-preventive	1
Astringent	1
ATPase-Inhibitor	1
Attifuge	1
Autotoxic	1
Bacteristat	3
Beta-Adrenergic Receptor Blocker	1
Beta-Blocker	2
Beta-Glucuronidase-Inhibitor	3
Bifidogenic	1
Bradycardiac	1
Bronchoprotectant	1
Bruchiphobe	1
Calcium-Antagonist	5
Calcium-Antagonist?	1
Calcium-Channel-Blocker	1
Calmodulin-Antagonist	1
cAMP-Phosphodiesterase-Inhibitor	3
Cancer-Preventive	20
Candidicide	8

<b>Activity</b>	<b>Chemical Count</b>
Candidistat	1
Capillariprotective	2
Carcinogenic	3
Cardiac	1
Cardiomyopathogenic	1
Cardioprotective	10
Cardiotoxic	1
Caspase-8-Inducer	1
Catabolic	2
Chemopreventive	7
Chemopreventive (Breast Cancer)	1
Chemopreventive (Colon Cancer)	1
Cholagogue	4
Choleretic	11
Cholesterolytic	2
Circulotonic	1
Clastogenic	2
CNS-Active	3
CNS-Depressant	2
CNS-Stimulant	2

<b>Activity</b>	<b>Chemical Count</b>
CNS-Toxic	1
Co-carcinogenic	1
Cold-preventive	1
Coleoptophile	1
Collagen-Sparing	5
Collagenic	2
Colorant	1
COMT-Inhibitor	2
Copper-Antagonist	1
Copper-Chelator	2
COX-1-Inhibitor	2
COX-2-Inhibitor	5
Cyclooxygenase-Inhibitor	3
Cytochrome-P450-1A1-Inhibitor	1
Cytochrome-P450-1A2-Inhibitor	1
Cytoprotective	3
Cytotoxic	6
Deiodinase-Inhibitor	3
Deodorant	1
Depressant	1

<b>Activity</b>	<b>Chemical Count</b>
Detoxicant	2
Detoxicant (Alcohol)	1
Diaphoretic?	2
Differentiator	3
Diuretic	12
DNA-Active	1
DNA-Protective	2
Emmenagogue	1
Encephalopathic	1
Energizer	1
Enterocontractant	1
Ergogenic	1
Erythrocytogenic	1
Estrogenic	6
Estrogenic?	1
Ethanolytic	1
Expectorant	5
Febrifuge	1
Fibrinolytic	1
Fistula-Preventive	1

<b>Activity</b>	<b>Chemical Count</b>
FLavor	9
Fungicide	11
Fungiphilic	1
Fungistat	2
Gastroprotective	2
Gastrostimulant	1
Glucosyl-Transferase-Inhibitor	1
Gonadotrophic	1
GST-Inducer	1
Hemolytic	1
Hemostat	2
Hepatocarcinogenic	1
Hepatomagenic	2
Hepatoprotective	12
Hepatoregenerative	1
Hepatotonic	1
Hepatotoxic	1
Hepatotropic	2
Herbicide	5
HIF-1alpha-Inhibitor	1

<b>Activity</b>	<b>Chemical Count</b>
Histamine-Inhibitor	2
Histaminic	1
HIV-RT-Inhibitor	2
Hyaluronidase-Inhibitor	4
Hydrocholerectic	1
Hypercholesterolemic	1
Hyperemic	1
Hypertensive	2
Hypocholesterolemic	12
Hypoglycemic	8
Hypolipidemic	4
Hypotensive	10
Hypothermic	1
Hypotriglyceridemic	1
Hypouricemic	1
ICAM-1-Inhibitor	3
IKK-Inhibitor	2
Immunomodulator	7
Immunostimulant	12
Immunosuppressant	3



<b>Activity</b>	<b>Chemical Count</b>
Inhalant	1
iNOS-Inhibitor	4
Inotropic	3
Insect-Repellent	1
Insecticide	5
Insectifuge	12
Insectifuge?	1
Insectiphile	2
Insulinogenic	4
Interferon-Synergist	1
Interferonogenic	3
Interleukin-6-Inhibitor	2
Iodothyronine-Deiodinase-Inhibitor	2
Irritant	7
JNK-Inhibitor	1
Juvabional	4
Larvicide	2
Larvostat	3
Laxative	4
Leptingenic	1

<b>Activity</b>	<b>Chemical Count</b>
Leukotriene-Inhibitor	2
Lipolytic	3
Lipotropic	1
Lipoxygenase-Inhibitor	7
Lithogenic	1
Litholytic	1
Lubricant	1
Lyase-Inhibitor	1
MAO-A-Inhibitor	1
MAO-Inhibitor	2
MAPK-Inhibitor	2
Mast-Cell-Stabilizer	1
Memorigenic	1
Metal-Chelator	3
Metal-Chelator (Copper)	1
Metalloproteinase-Inhibitor	2
Mitogenic	1
MMP-9-Inhibitor	2
Mosquitocide	1
Mucogenic	3

<b>Activity</b>	<b>Chemical Count</b>
Mucolytic	1
Musculotropic	1
Mutagenic	4
Myoprotective	1
Myorelaxant	8
NADH-Oxidase-Inhibitor	2
Natriuretic	1
Nematicide	3
NEP-Inhibitor	2
Neuroprotective	3
Neurotransmitter	1
NF-kB-Inhibitor	5
NO-Genic	2
NO-Inhibitor	3
NO-Synthase-Inhibitor	2
Nodulation-Signal	1
Ornithine-Decarboxylase-Inhibitor	7
Osteogenic	1
Oviposition-Stimulant	2
Ovulant	1

<b>Activity</b>	<b>Chemical Count</b>
Ozone-Scavenger	1
P21-Inducer	1
P450-2B1-Inhibitor	2
P450-Inducer	2
P450-Inhibitor	1
PAF-Inhibitor	2
Perfumery	6
Peristaltic	1
Pesticide	39
PGE2-Inhibitor	1
Phagocytotic	5
Pheromone	1
Phospholipase-Inhibitor	1
Photosensitizer	1
Phytoalexin	1
PKC-Inhibitor	2
Plasmodicide	1
Polyamine-Synthesis-Inhibitor	2
Prebiotic	1
Preservative	1

<b>Activity</b>	<b>Chemical Count</b>
Probiotic	1
Probiotigenic	1
Progestational	1
Proliferant	2
Prooxidant	3
Propepic	1
Prostaglandigenic	2
Prostaglandin-Sparer	1
Prostaglandin-Synthesis-Inhibitor	2
Prostaglandin-Synthetase-Inhibitor	1
Protein-Kinase-C-Inhibitor	4
Protisticide	2
PTK-Inhibitor	3
Quinone-Reductase-Inducer	3
Radioprotective	2
Sedative	9
Serotonnergic	1
Sialogogue	1
Soap	1
Spasmogenic	2

<b>Activity</b>	<b>Chemical Count</b>
Spermicide	1
Spermigenic	1
Succinoxidase-Inhibitor	1
Sunscreen	5
Sweetener	2
Taenicide	1
Teratologic	2
Termitifuge	1
Testosteronigenic	1
Thymoprotective	1
TNF-alpha-Inhibitor	4
Topoisomerase-I-Inhibitor	4
Topoisomerase-II-Inhibitor	4
Tranquilizer	4
Transdermal	3
Trichomonicide	1
Tumorigenic	2
Tyrosinase-Inhibitor	2
Tyrosine-Kinase-Inhibitor	1
Ubiquiot	2

<b>Activity</b>	<b>Chemical Count</b>
Ulcerogenic	1
Uricosuric	1
Urinary-Acidulant	1
Uterorelaxant	1
Uterosedative	1
Uterotrophic	2
Vasodilator	11
Vasopressor	1
VEGF-Inhibitor	4
Vulnerary	5
Xanthine-Oxidase-Inhibitor	4