

**Dr. Duke's Phytochemical and Ethnobotanical Database****Biological Activities Found in *Pinus sylvestris***

<b>Activity</b>	<b>Chemical Count</b>
(-)-Chronotropic	4
(-)-Inotropic	4
11B-HSD-Inhibitor	1
5-Alpha-Reductase-Inhibitor	1
5-Lipoxygenase-Inhibitor	2
Acaricide	7
Acarifuge	1
ACE-Inhibitor	11
Acetylcholinergic	1
AChE-Inhibitor	1
Acidulant	1
Aggregant	1
Aldehyde-Oxidase-Inhibitor	1
Aldose-Reductase-Inhibitor	16
Allelochemic	9
Allelopathic	9
Allergenic	19
Allergenic?	1

<b>Activity</b>	<b>Chemical Count</b>
Alpha-Glucosidase-Inhibitor	1
Anabolic	2
Analgesic	14
Androgenic	3
Androgenic?	1
Anesthetic	7
Angiogenic	1
Angiotensin-Receptor-Blocker	1
Anorexic	1
Anthelmintic	4
Antiacetylcholine	1
Antiacetylcholinesterase	9
Antiacne	8
Antiadenomic	2
Antiadenoviral	1
Antiaflatoxin	1
AntiAGE	1
Antiaggregant	8
Antiaging	4
Antialcoholic	1

<b>Activity</b>	<b>Chemical Count</b>
Antiallergenic	2
Antiallergic	8
Antialopecic	1
Antialzheimeran	3
Antialzheimeran?	2
Antiamblyopic	1
Antianaphylactic	4
Antiandrogenic	2
Antianemic	2
Antiangiogenic	1
Antiarrhythmic	2
Antiarthritic	5
Antiasthmatic	8
Antiatherogenic	1
Antiatherosclerotic	4
Antibacillary	1
Antibacterial	42
Antibiotic	1
Antibronchitic	3
Anticancer	11

<b>Activity</b>	<b>Chemical Count</b>
Anticancer (Breast)	3
Anticancer (Cervix)	2
Anticancer (Colon)	2
Anticancer (Forestomach)	2
Anticancer (Gastric)	1
Anticancer (Liver)	3
Anticancer (Lung)	2
Anticancer (Skin)	3
Anticarcinogenic	3
Anticarcinomic	1
Anticarcinomic (Breast)	1
Anticariogenic	7
Anticataract	2
Anticatarrh	2
Anticervicaldysplasic	2
AntiCFS	1
Anticholinesterase	3
Antichoreic	1
Anticirrhotic	1
Anticlastogen	2

<b>Activity</b>	<b>Chemical Count</b>
Anticlimacteric	2
Anticoagulant	1
Anticold	1
Anticolitic	1
Anticomplementary	4
Anticonvulsant	2
Anticoronary	1
AntiCrohn's	2
AntiCTS	1
Anticystinuric	1
Anticystitic	1
Antidandruff	1
Antidecubitic	1
Antidementia	2
Antidepressant	3
Antidermatitic	2
Antidiabetic	10
Antidiarrheic	2
Antidiuretic	1
Antidote (Aluminum)	1

<b>Activity</b>	<b>Chemical Count</b>
Antidote (Cadmium)	1
Antidote (Lead)	1
Antidote (Paraquat)	1
Antidysenteric	2
Antidyskinetic	1
Antidysmenorrheic	1
AntiEBV	3
Antieczemic	1
Antiedemic	5
Antielastase	2
Antiemetic	1
Antiencephalitic	2
Antiendometriotic	1
Antiescherichic	3
Antiesophagitic	1
Antiestrogenic	3
Antifatigue	4
Antifeedant	18
Antifertility	2
Antifibrinolytic	1

<b>Activity</b>	<b>Chemical Count</b>
Antifibrosarcomic	1
Antifibrositic	1
Antifibrotic	1
Antiflu	5
Antigallstone	1
Antigastric	1
Antigastritic	1
Antigenotoxic	2
Antigingivitic	1
Antiglaucomic	1
Antigliomic	1
Antigonadotrophic	1
Antigonadotropic	3
Antigranulocytopenic	1
Antigrey	1
AntiGTF	1
Antihalitosisic	2
Antihangover	2
Antihelicobacter	2
Antihemolytic	2

<b>Activity</b>	<b>Chemical Count</b>
Antihemophilic	1
Antihemorrhagic	2
Antihemorrhoidal	1
Antihepatitic	3
Antihepatoadenomic	1
Antihepatotic	1
Antihepatotoxic	11
Antiherpetic	9
Antihiccup	1
Antihistaminic	5
AntiHIV	7
Antihomocysteine	1
Antihydrocoele	1
Antihydrophobic	1
Antihypercholesterolemic	2
Antihyperglycemic	2
Antihyperkeratotic	1
Antihyperlipoproteinaemic	1
Antihypertensive	3
Antihyperthyroid	2



<b>Activity</b>	<b>Chemical Count</b>
Antihypogonadic	1
Antihysteria	1
Antiichthyotic	1
Antiileus	1
Antiincontinence	1
Antiinfertility	1
Antiinflammatory	26
Antiinsomniac	1
Antiischemic	1
Antiketotic	2
Antilaryngitic	2
AntiLegionella	3
Antileishmanic	3
Antileptic	1
Antileukemic	10
Antileukoplakic	1
Antileukotriene	5
Antilipolytic	1
Antilipoperoxidant	4
Antilithic	2

<b>Activity</b>	<b>Chemical Count</b>
Antilithic?	1
Antilupus	1
AntiLyme	1
Antilymphomic	2
Antimaculitic	3
Antimalarial	3
Antimanic	1
Antimastitic	1
Antimeasles	1
Antimelanogenic	3
Antimelanomic	2
Antimenopausal	1
Antimetastatic	1
Antimetastatic (Stomach)	1
Antimigraine	1
Antimite	1
Antimitotic	1
AntiMS	1
Antimutagenic	20
Antimyocarditic	1

<b>Activity</b>	<b>Chemical Count</b>
Antinauseant	1
Antineoplastic	1
Antinephritic	1
Antineuralgic	1
Antineuramidase	1
AntiNF-kB	1
Antinitrosaminic	8
Antinitrosic	1
Antinociceptive	7
Antinyctalopic	1
Antiobesity	2
Antionychogryphotic	1
Antionychyotic	1
Antiophidic	5
Antiophthalmic	1
Antiorchitic	1
Antiosteoarthritic	2
Antiosteoporotic	2
Antiotitic	3
Antioxidant	33

<b>Activity</b>	<b>Chemical Count</b>
Antiozenic	1
Antipancreatic	1
Antipapillomic	1
Antiparkinsonian	1
Antiparotitic	1
Antiperiodontal	1
Antiperiodontitic	1
Antiperistaltic	1
Antipermeability	1
Antiperoxidant	9
Antipharyngitic	3
Antiphotophobic	1
Antipityriasic	1
Antiplateau	3
Antiplasmodial	3
AntiPMS	2
Antipneumonic	2
Antipodriac	2
Antipolio	2
Antipoliomyelitic	1

<b>Activity</b>	<b>Chemical Count</b>
Antiporphyrin	1
Antiprogestational	1
Antiproliferant	9
Antiprostaglandin	3
Antiprostanoid	1
Antiprostataadenomic	1
Antiprostatic	3
Antipruritic	1
Antipsoriac	2
Antipyretic	6
Antipyruvetic	1
Antiradicular	14
AntiRaynaud's	1
Antirenitic	1
Antiretinitic Optometry	1
Antiretinotic	1
Antirheumatalgic	1
Antirheumatic	4
Antirhinitic	3
Antisalmonella	3

<b>Activity</b>	<b>Chemical Count</b>
Antiscorbutic	1
Antiseborrheic	1
Antiseptic	25
Antiserotonin	1
Antishingles	1
Antishock	1
Antisickling	2
Antisinusitic	3
Antispasmodic	24
Antispastic	1
Antistaphylococcic	8
Antisteatotic	1
Antistomatitic	1
Antistreptococcic	4
Antistress	2
Antisunburn	2
Antisyndrome-X	1
Antitachycardic	1
Antithiamin	3
Antithrombic	2

<b>Activity</b>	<b>Chemical Count</b>
Antithyroid	2
Antithyrotoxic	1
AntiTNF	1
Antitrypanosomic	1
Antitubercular	1
Antitumor	16
Antitumor (Bladder)	1
Antitumor (Breast)	7
Antitumor (Cervix)	2
Antitumor (CNS)	1
Antitumor (Colon)	8
Antitumor (Forestomach)	2
Antitumor (Gastric)	2
Antitumor (Liver)	3
Antitumor (Lung)	4
Antitumor (Mouth)	1
Antitumor (Ovary)	1
Antitumor (Pancreas)	1
Antitumor (Prostate)	2
Antitumor (Skin)	6

<b>Activity</b>	<b>Chemical Count</b>
Antitumor (Stomach)	2
Antitumor-Promoter	8
Antitussive	5
Antiulcer	12
Antiulcerogenic	1
Antivaccinia	1
Antivaricose	1
Antiviral	21
Antiwrinkle	1
Antixerophthalmic	1
Antiyeast	3
Anxiolytic	1
Aphrodisiac	1
Apoptotic	9
Artemicide	3
Arteriodilator	1
Ascaricide	1
Asthma-preventive	1
Atherogenic	1
ATPase-Inhibitor	1



<b>Activity</b>	<b>Chemical Count</b>
Autotoxic	1
Bactericide	1
Bacteriostatic	1
Bacteristat	1
Barbituate-Synergist	1
Beta-Adrenergic Receptor Blocker	5
Beta-Glucuronidase-Inhibitor	1
Bradycardiac	1
Bronchoprotectant	1
Bronchorelaxant	1
Bruchifuge	2
Calcium-Antagonist	4
Calcium-Sparing	1
Calmodulin-Antagonist	1
cAMP-Phosphodiesterase-Inhibitor	2
Cancer-Preventive	29
Candidicide	11
Candidistat	1
Capillariprotective	1
Carcinogenic	11

<b>Activity</b>	<b>Chemical Count</b>
Cardiac	1
Cardiodepressant	2
Cardioprotective	3
Cardiotonic	3
Carminative	3
Caspase-3-Inducer	1
Caspase-8-Inducer	1
Catabolic	1
Cerebrostimulant	1
Cerebrotonic	1
Chelator	1
Chemopreventive	9
Cholagogue	4
Choleretic	11
Cholesterolytic	1
Choline-Sparing	2
Cholinergic	1
Cicatrizant	1
Clastogenic	2
CNS-Active	2

<b>Activity</b>	<b>Chemical Count</b>
CNS-Depressant	2
CNS-Stimulant	6
CNS-Toxic	1
Co-carcinogenic	1
Cold-preventive	1
Coleoptophile	1
Collagen-Sparing	2
Collagenic	1
Collyrium	1
Colorant	7
Comedogenic	1
COMP-Inhibitor	1
COMT-Inhibitor	1
Convulsant	3
Copper-Chelator	1
Cosmetic	1
Counterirritant	4
COX-1-Inhibitor	2
COX-2-Inhibitor	4
Culicide	1

<b>Activity</b>	<b>Chemical Count</b>
Cyclooxygenase-Inhibitor	3
Cytochrome-P450-1A2-Inhibitor	1
Cytochrome-P450-Inducer	3
Cytoprotective	1
Cytostatic	1
Cytotoxic	7
Decongestant	3
Degranulant	2
Deiodinase-Inhibitor	1
Deliriant	1
Demulcent	1
Dentifrice	2
Deodorant	1
Dermal	1
Dermatitigenic	3
Detoxicant	2
Diagnostic	1
Diaphoretic?	2
Differentiator	2
Digestive	1

<b>Activity</b>	<b>Chemical Count</b>
Diuretic	5
DNA-Active	1
DNA-Binder	2
DNA-Protective	1
Dye	1
Ecbolic	1
Edemagenic	2
Embryotoxic	1
Emetic	3
Enterocontractant	1
Epileptigenic	1
Estrogenic	5
Expectorant	14
Febrifuge	1
Fistula-Preventive	1
Flatugenic	3
FLavor	28
Fungicide	31
Fungiphilic	1
Fungistat	2

<b>Activity</b>	<b>Chemical Count</b>
Gastroprotective	4
Gastrostimulant	1
Glaucomagenic	1
Glucosyl-Transferase-Inhibitor	2
Glutathione-Depleting	1
Glutathionigenic	1
Gonadotrophic	1
Gram(+)icide	2
Gram(-)icide	2
GST-Inducer	1
Hemolytic	3
Hemostat	2
Hepatocarcinogenic	2
Hepatomagenic	1
Hepatoprotective	10
Hepatotonic	2
Hepatotoxic	2
Hepatotropic	3
Herbicide	12
Histamine-Inhibitor	2

<b>Activity</b>	<b>Chemical Count</b>
Histaminic	2
HIV-RT-Inhibitor	1
Hydrocholerectic	1
Hypercholesterolemic	2
Hyperglycemic	1
Hyperuricemic	1
Hypocholesterolemic	7
Hypocholesterolemic?	1
Hypoglycemic	8
Hypolipidemic	2
Hypotensive	6
Hypothermic	3
Ileorelaxant	2
Immunomodulator	2
Immunostimulant	9
Immunosuppressant	3
Inflammatory	2
Inhalant	1
iNOS-Inhibitor	1
Inotropic	1

<b>Activity</b>	<b>Chemical Count</b>
Insect-Repellent	2
Insecticide	10
Insectifuge	27
Insectiphile	3
Insulinase-Inhibitor	1
Insulinogenic	3
Insulinotonic	1
Interferon-Synergist	1
Interferonogenic	2
Interleukin-1-alpha-Inhibitor	1
Interleukin-6-Inhibitor	2
Interleukin-6-mRNA-Inhibitor	1
Irritant	22
Juvabional	2
Keratolytic	1
Lactagogue	1
Larvicide	3
Larvostat	2
Laxative	5
Leucocytogenic	1



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

<b>Activity</b>	<b>Chemical Count</b>
Mosquitofuge	1
Motor-Depressant	2
Mucogenic	1
Mucolytic	1
Mutagenic	4
Mutagenic?	1
Myocardiotonic	1
Myocontractant	1
Myopic	1
Myorelaxant	9
Myotonic	1
NADH-Oxidase-Inhibitor	1
Nematicide	10
Nematistat	1
Neoplastic	1
NEP-Inhibitor	1
Nephroprotective	1
Nephrotoxic	2
Neuroprotective	2
Neurotoxic	2

<b>Activity</b>	<b>Chemical Count</b>
Neurotransmitter	1
NF-kB-Inhibitor	2
NO-Genic	2
NO-Inhibitor	4
NO-Synthase-Inhibitor	1
Occuloirritant	1
Ornithine-Decarboxylase-Inhibitor	6
Oviposition-Stimulant	1
Ovulant	1
Oxidase-Inhibitor	1
Ozone-Scavenger	1
P450-2B1-Inhibitor	7
P450-Inducer	5
P450-Inhibitor	1
Pancreatogenic	2
Parasiticide	1
Parasympathomimetic	2
Pediculicide	2
Perfume	2
Perfumery	25

<b>Activity</b>	<b>Chemical Count</b>
Peristaltic	2
Peroxynitrite-Scavenger	1
Pesticide	66
PGE2-Inhibitor	1
Phagocytotic	4
Phospholipase-Inhibitor	1
Photosensitizer	1
Phytoalexin	3
Plasmodicide	1
Preservative	2
Previtamin-A	2
Proliferant	1
Prooxidant	3
Propepic	2
Prostaglandigenic	5
Prostaglandin-Synthesis-Inhibitor	3
Prostatitigenic	1
Protein-Kinase-C-Inhibitor	1
Protisticide	3
Psychotropic	1

<b>Activity</b>	<b>Chemical Count</b>
PTK-Inhibitor	1
Quinone-Reductase-Inducer	2
Renoirritant	1
Respirainhibitor	1
Respirastimulant	1
Retinoprotectant Optometry	1
Reverse-Transcriptase-Inhibitor	1
RNA-genic	1
Rodenticide	1
Rubefacient	3
Scabicide	1
Schistosomicide	3
Secretogogue	5
Secretolytic	2
Sedative	16
Sialogogue	1
Soap	1
Spasmogenic	7
Spermicide	2
Stimulant	1

<b>Activity</b>	<b>Chemical Count</b>
Sunscreen	3
Surfactant	2
Sweetener	6
Sympathomimetic	1
Teratogenic	2
Teratologic	1
Termiticide	2
Termitifuge	1
Testosterone-Hydroxylase-Inducer	2
Testosterone-Inducer	1
Thymoprotective	1
TNF-alpha-Inhibitor	2
Topoisomerase-I-Inhibitor	1
Topoisomerase-II-Inhibitor	1
Tranquilizer	3
Transdermal	7
Trichomonicide	4
Triglycerigenic	1
Trypanocide	1
Tumorigenic	2

<b>Activity</b>	<b>Chemical Count</b>
Tyrosinase-Inhibitor	7
Tyrosine-Kinase-Inhibitor	1
Ubiquiot	8
Ulcerogenic	2
Uricogenic	1
Uricosuric	2
Urinary-Acidulant	1
Uterosedative	1
Vasoconstrictor	1
Vasodilator	6
VEGF-Inhibitor	1
Verrucolytic	1
Vibriocide	1
Vulnerary	8
Xanthine-Oxidase-Inhibitor	6