

# Patents, Papers & Technical Support of Ingredients

## Echinacea Extract

**Echinacea tea was effective for relieving cold symptoms in a shorter period of time than the group treated with the placebo:**

- Lindenmuth GF, Lindenmuth EB. The efficacy of echinacea compound herbal tea preparation on the severity and duration of upper respiratory and flu symptoms: a randomized, double-blind placebo-controlled study. *J Altern Complement Med*. 2000;6(4):327–34. [[PubMed](#)] [[Google Scholar](#)]
- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3024156/>

**Standardized extracts of Echinacea were effective in the prevention of symptoms of the common cold after clinical inoculation:**

- (Schoop R, Klein P, Suter A, Johnston S L. Echinacea in the prevention of induced rhinovirus colds: a meta-analysis. *Clin Ther*. February 2006;28(2):174-83 (Abstract)).
- Borchers et al., 2000; Inflammation and Native American medicine: the role of botanicals; *The American Journal of Clinical Nutrition*, Volume 72, Issue 2, August 2000, Pages 339–347
- Huntley AL, Thompson Coon J, Ernst E. The safety of herbal medicinal products derived from Echinacea species: a systematic review. *Drug Saf* 2005;28:387-400.

## **Immunostimulatory activity:**

- Y. Goel et al., Alkylamides of Echinacea purpurea stimulate alveolar macrophage function in normal rats. *International Immunopharmacology* 2:381-387 (2002)
- *Planta Medica* 60:37-40 (1994); R. Bauer et al., Echinacea species as potential immunostimulatory drugs. *Economic and Medicinal Plant Research* 5:253-321 (1991)
- Steinmuller et al., Polysaccharides isolated from plant cell cultures of Echinacea purpurea enhance the resistance of immunosuppressed mice against systemic infections with *Candida albicans* and *Listeria monocytogenes*, *Int. J. Immunopharmacol.*, 15(5): 605-614 (1993)
- Sun et al., The American coneflower: a prophylactic role involving nonspecific immunity, *J. Altern. Complement Med.*, 5(5): 437-446 (1999)
- Currier NL, Miller SC. Natural killer cells from aging mice treated with extracts from Echinacea purpurea are quantitatively and functionally rejuvenated. *Exp Gerontol* 2000, 35: 627-639
- Currier NL, Miller SC. Echinacea purpurea and melatonin augment natural-killer cells in leukemic mice and prolong life span. *J Altern Complement Med* 2001, 7: 241-251
- Currier NL, Miller SC. The effect of immunization with killed tumor cells, with/without feeding of Echinacea purpurea in an erythroleukemic mouse model. *J Altern Complement Med* 2002, 8: 49-58

## **Use of Echinacea preparations in the adjuvant therapy of inflammations:**

- Tragni et al., Evidence from two classic irritation tests for an anti-inflammatory action of a natural extract, Echinacea B., *Food Chem. Toxicol.*, 23(2): 317-319 (1985)

- Facino et al., Direct characterization of caffeoyl esters with antihyaluronidase activity in crude extracts from Echinacea angustifolia roots by fast atom bombardment tandem mass spectrometry, *Farmaco*, 48(10): 1447-1461 (1993)

**Skin protection:**

- Facino et al., Echinacoside and caffeoyl conjugates protect collagen from free radical-induced degradation: a potential use of Echinacea extracts in the prevention of skin photodamage, *Planta Med.*, 61(6): 510-514 (1995)

Patents Granted for Echinacea for stimulating the immune system, treatment for microbial infections, as an anti-inflammatory and immunosuppressant, as an anti-anxiety agent, for tinnitus in the ear, for anti-cancer properties, as an anti-viral agent, as an anti-influenza supplement, and as a treatment for urinary incontinence and prostate hypertrophy.

US20020028258, US6881426, US6946490, US7491414, US8206762, US8920855, US20080254143, US6991811, US7071233, US9770477, US6379716, US7563466, US10016478, US6541045

**Astralagus Root:**

**Astralagus root as an antioxidant:**

- Gelber et al., "Composition and method for treating the effects of diseases and maladies", U.S. Pat. No. 6,841,544.
- Gelber et al., "Composition and method for treating the effects of diseases and maladies", U.S. Pat. No. 6,759,062

**As an immune booster:**

- Lam, "Natural, non-allergenic, immune system stimulant", U.S. Pat. No. 6,468,541
- Lam, "Herbal immune system stimulant", U.S. Pat. No. 5,464,982.
- "Method for enhancing effect of immunotherapy for cancer" U.S. Pat No 10, 478, 468
- An, et al, "Acid-modified arabinogalactan protein composition", U.S. Pat No 6, 991, 817
- D.-T. Chu et al., "Immunotherapy with Chinese medicinal herbs. II . . . ", *J. Clin. Lab. Immunol.*, 25, 125-129 (1988)
- K. S. Zhao et al., "Enhancement of the immune response in mice by Astragalus membranaceus extracts", *Immunopharmacology*, 20, 225-234 (1990)

**For treatment of allergic reactions, prophylactics of an allergic reaction, inflammatory reaction and prophylactics of inflammatory reactions:**

- Hu, "Herbal compositions and uses for the treatment of allergic reactions", U.S. Pat. No. 6,814,985

**Stimulates hematopoiesis:**

- The section entitled "Huangqi", pages 1041-1046, of "Pharmacology and Applications of Chinese Materia Medica", H.-M. Chang and P. P.-H. But, eds., World Scientific Publishing Co., Singapore, 1987
- "Methods of treating idiopathic thrombocytopenic purpura with compositions comprising extracts of Astragalus membranaceus", US Pat. No. 8, 728, 543



Patents Granted for Astragalus Root for Estrogen modulation, treatment for chronic liver disease, stimulating the immune system, stimulating the hematopoietic system, enhancing immunotherapy during cancer, immunomodulatory polysaccharide fractions, preventing thrombosis, control and prevention of inflammatory and allergic reactions, skin care, preventing liver fibrosis, suppressing the growth of prostate cancer cells, increasing immune function, anti-aging compositions, acne prevention, relieving fatigue, relieving alcohol induced hangover symptoms and improving liver function, increasing energy, strength and immune function, Telomere maintenance, anti-cancer remedy, immunity enhancing for lung support, weight loss, stimulating blood circulation, anti-infertility, cellular health, increase of lean muscle mass, general cognition, anti-aging, and hormone balance.

US9220740, US8846626, US8728543, US6991817, US5268467, US10478468, US10227547, US20090104286, US9585926, US8858954, US7749546, US4843067, US8986756, US9155755, US9603789, US9320769, US7234931, US6465018, US8974839, US7005146, US6841176, US6541046, US5942233, US20180028591, US20100239553, US9789142, US9744204, US9597279, US6238707

#### NAC N-Acetyl Cysteine:

##### **Antioxidant properties:**

- Manikandan, P. et al, Molecular and Cellular Biochemistry, 2006, 290, 87-96; Rani Thaakur, S. et al, Pharmacologyonline, 2009, 1, 369-376
- Derio Bizkaia, "Antioxidant composition", U.S. Pat. No. 9,492, 475

##### **Anti-viral effects:**

- Lee R. Morgan, "Method of treating herpes virus infections with N,N'-diacetylcystine and derivatives", U.S. Pat. No. 4, 708, 965
- Herzenberg, et al, "Method of treating the symptoms of human rhinovirus infection", U.S. Pat. No. 5, 580, 577
- Wulf, et al, "Treatment of diseases associated with cysteine deficiency", U.S. Pat. No. 5, 607, 974

**Dissolves or reduces the viscosity of mucous as produced in the respiratory airways, and including not only the lung tree but all the upper airways including the cavities in the forehead and the cheeks, to prevent or treat sinusitis, to thereby eliminate or reduce the symptoms of virus infections causing rhinitis, bronchitis and other respiratory tract congestion:**

- Guo, et al, "Dosage form of N-acetyl cysteine", U.S. Pat. No. 6, 623, 754

Patents Granted for NAC N-Acetyl Cysteine for increasing insulin sensitivity, NAC Tablet, reduced intracellular cysteine levels, anti-viral compound, lung support, treating neuroinflammation and infections, reduce the risk in humans exposed to ionizing radiation, antioxidant for skin disease or condition, wound dressing, preventing and aiding recovery of hangovers, reduce hangover and reduce blood alcohol levels, and as a hangover remedy.



US6258848, US6623754 x2, US5607974, US5580577, US6841176, US8889101, US9655966, US9492475, US9023383, US9962365, US9744202 x2, US9603830.

### Golden Seal:

Patents Granted for Golden Seal for anti-fungal crème, obesity treatment, treatment of decubitus ulcers, hydration, herbal composition for treating muscle aches and joint pain, and anti-inflammatory, bacteriostatic, bacteriocidal, and vasodilator effects.

US6495153, US8420131, US4719111, US6207163, US5958418, US7682617.

### Cat's Claw:

#### **Antioxidant activity:**

- Pilarski, R., Zieliski, H., Ciesiolka, D., Gulewicz, K., 2005. Antioxidant activity of ethanolic and aqueous extracts of *Uncaria tomentosa* (Willd.) DC. *J Ethnopharmacol.* 104, 18-23
- Sandoval, M., Okuhama, N. N., Zhang, X. J., Condezo, L. A., Lao, J., Angeles, F. M., Musah, R. A., Bobrowski, P., Miller, M. J., 2002. Anti-inflammatory and antioxidant activities of cat's claw (*Uncaria tomentosa* and *Uncaria guianensis*) are independent of their alkaloid content. *Phytomedicine.* 9, 325-337.
- Kepplinger, K., G. Laus, M. Wurm, M.P. Dierich and H. Teppner, 1999. *Uncaria tomentosa* (Willd.) DC. Ethnomedicinal use and new pharmacological toxicological and botanical results. *J. Ethnopharmacol.*, 64: 23-24
- Desmarchelier, C., Mongelli, E., Coussio, J., Ciccio, G., 1997. Evaluation of the in vitro antioxidant activity in extracts of *Uncaria tomentosa* (Willd.) DC. *Phytotherapy Research.* 11, 254-256.

#### **Anti-inflammatory:**

- Goncalves, C., Dinis, T., Batista, M. T., 2005. Antioxidant properties of proanthocyanidins of *Uncaria tomentosa* bark decoction: a mechanism for anti-inflammatory activity. *Phytochemistry.* 66, 89-98.
- Sandoval-Chacon M. et al, "Anti-inflammatory actions of Cat's claw: the role of NF-KB" published in *Aliment Pharmacol Ther* 12, 1279-1289, (1998)

#### **Immuno-stimulation:**

- Akesson C, Pero R W, Ivars F., 2003b. C-Med 100, a hot water extract of *Uncaria tomentosa*, prolongs lymphocyte survival in vivo. *Phytomedicine.* 10: 23-33
- Akesson, C., Lindgren, H., Pero, R. W., Leanderson, T., Ivars, F., 2003a. An extract of *Uncaria tomentosa* inhibiting cell division and NF-kappa B activity without inducing cell death. *Int. Immunopharmacol.* 3, 1889-900
- Lemaire, I., Assinewe, V., Cano, P., Awang, D. V., Arnason, J. T., 1999. Stimulation of interleukin-1 and -6 production in alveolar macrophages by the neotropical liana, *Uncaria tomentosa* (uia de gato). *Ethnopharmacol.* 64, 109-115.
- Wagner, H., Kreutzkamp, B., Jurcic, K., 1985. The alkaloids of *Uncaria tomentosa* and their phagocytosis-stimulating action. *Planta Med.* 5, 419-423.
- Wurm Martin, et al, "Pentacyclic Oxindole Alkaloids from *Uncaria tomentosa* induce human endothelial cells to release a lymphocyte-proliferation-regulating factor" published in *Planta Medica*, 64, 701-704, (1998)



- Keplinger, "Process and substances for the release of a growth-regulating factor from endothelial cells", U.S. Pat. No. 7, 238, 374

#### **Treating auditory disfunction:**

- The United States of America as represented by the Department of Veterans Affairs, "Methods and compositions for preventing and treating auditory dysfunctions", U.S. Pat. No. 9, 889, 107
- Bacher, N., Tiefenthaler, M., Sturm, S., Stuppner, H., Ausserlechner, M. J., Kofler, R., Konwalinka, G., 2006. Oxindole alkaloids from *Uncaria tomentosa* induce apoptosis in proliferating, G0/G1-arrested and bcl-2-expressing acute lymphoblastic leukaemia cells. *Br J Haematol.* 132, 615-622.
- Bartos, J., 1980. Colorimetric determination of organic compounds by formation of hydroxamic acids. *Talanta.* 27, 583-590.

#### **DNA Repair:**

- Sheng, Y., Li, L., Holmgren, K., Pero, R. W., 2001. DNA repair enhancement of aqueous extracts of *Uncaria tomentosa* in a human volunteer study. *Phytomedicine.* 8, 275-282.
- Mammone, T., Akesson, C., Gan, D., Giampapa, V., Pero, R. W., 2006. A water soluble extract from *Uncaria tomentosa* (Cat's Claw) is a potent enhancer of DNA repair in primary organ cultures of human skin. *Phytother Res.* 20, 178-183.

#### **Anti-cancer:**

- Gurrola-Diaz, C. M., Garcia-López, P. M., Gulewicz, K., Pilarski, R., Dihlmann, S., 2010 Inhibitory mechanisms of two *Uncaria tomentosa* extracts affecting the Wnt-signaling pathway. *Phytomedicine.* doi:10.1016

Patents Granted for Cat's Claw for treatment of herpes, encouraging lipolysis, treatment of Alzheimer's disease, for the release of growth-regulating factors, enhancement of the immune system, separating immunostimulating and immunosuppressants, enhancement of the immune system, anti-inflammatory, immune stimulation, cognitive clarity, auditory disfunction, and skin treatment.

US8906423, US8741359, US7754250 x6 (gerard castillo), US7238374, US6797286, US6039949, US5302611 x3 (klaus keplinger), US10350258, US9889107, US9782448

#### **Oregano:**

##### **Antibacterial properties:**

- Journal Food Protection, Volume 64, July 2001 (Researchers at the Department of Food Science at the University of Tennessee reported that, among various plant oils, oil of oregano exhibited the greatest antibacterial action against common pathogenic germs such as Staph, E. coli and Listeria)
- . Journal Applied Microbiology, Volume 88, February 2000 (British researchers reported oregano oil had antibacterial activity against 25 different bacteria.);
- Belaiche P, Traite de Phytotherapie et d'Armootherapie, Tome 1. L'Aromatogramme, Maloine SA Editeur, 1979, pp 92-100
- "Antimicrobial efficacy of an oregano oil and caprylic acid blend", U.S. Pat. No. 9, 578, 878
- Sivropoulou A et al. , Antimicrobial and cytotoxic activities of *Origanum* essential oils, *J Agric Food Chem* 1995



### **Antifungal properties**

- International Journal of Food Microbiology found oil of oregano to be an excellent antifungal, completely inhibiting the growth of the nine fungi tested. Other studies have been published that demonstrate the ability of oregano essential oil to kill yeast, including *Candida albicans*.
- A. Akgul, M. Kivanc, "Inhibitory effects of selected Turkish spices and oregano components on some foodborne fungi", *International Journal of Food Microbiology*, Volume 6, Issue 3, May 1988, Pages 263-268
- Azzouz MA, Bullerman LB. Comparative antimycotic effects of selected herbs, spices, plant components and commercial antifungal agents. *J Food Prot* 1982;45:1298—301
- *Candida albicans*. See Stiles JC et al. , The inhibition of *Candida albicans* by oregano, *J Applied Nutr* 1995; 47:96-102

### **Anti-parasitic properties:**

- DeLuca, et al., "Oregano for the treatment of internal parasites and protozoa", U.S. Pat. No. 5, 955, 086

### **Anti-inflammatory properties:**

- "Compositions and methods for modulating inflammatory potential", U.S. Pat. No. 9, 795, 647

Patents Granted for Oregano for anti-viral, antifungal, antiparasitic, antiseptic properties, treatment of internal parasites, treating inflammation, rheumatoid arthritis. Osteoarthritis, antimicrobial, reducing inflammation, antiviral compositions, and for inhibiting the growth of fungus.

US8834942, US5955086, US9795647 x2, US9578878, US6264995, US7429396, US10512664

### Licorice:

#### **Glutathione production enhancer:**

- "Glutathione production enhancer, prophylactic/therapeutic agent for diseases caused by glutathione deficiency, and food, beverage and feed", U.S. Pat. No. 8,828,955

#### **Antiatherosclerotic effects:**

- Fuhrman B, Volkova N, Kaplan M, Presser D, Attias J, Hayek T, et al. Antiatherosclerotic effects of licorice extract supplementation on hypercholesterolemic patients: increased resistance of LDL to atherogenic modifications, reduced plasma lipid levels, and decreased systolic blood pressure. *Nutrition*. 2002;18(3):268–73. [[PubMed](#)] [[Google Scholar](#)]
- Fuhrman B, Buch S, Vaya J, Belinky PA, Coleman R, Hayek T, et al. Licorice extract and its major polyphenol glabridin protect low-density lipoprotein against lipid peroxidation: in vitro and ex vivo studies in humans and in atherosclerotic apolipoprotein E-deficient mice. *Am J Clin Nutr*. 1997;66(2):267–75.
- Fogelman Y, Gaitini D, Carmeli E. Antiatherosclerotic effects of licorice extract supplementation on hypercholesterolemic patients: decreased CIMT, reduced plasma lipid levels, and decreased blood pressure. *Food Nutr Res*. (2016) 60:30830. 10.3402/fnr.v60.30830 [[PMC free article](#)] [[PubMed](#)] [[CrossRef](#)] [[Google Scholar](#)]

#### **Antiviral effects:**



- Fiore C, Eisenhut M, Krausse R, Ragazzi E, Pellati D, Armanini D, et al. . Antiviral effects of Glycyrrhiza species. *Phytother Res.* (2008) 22:141–8. 10.1002/ptr.2295 [[PubMed](#)] [[CrossRef](#)] [[Google Scholar](#)]

#### **Antibacterial effects:**

- Ajagannanavar SL, Battur H, Shamarao S, Sivakumar V, Patil PU, Shanavas P, et al. Effect of aqueous and alcoholic licorice (*Glycyrrhiza glabra*) root extract against *Streptococcus mutans* and *Lactobacillus acidophilus* in comparison to chlorhexidine: An *in vitro* study. *J Int Oral Health.* 2014;6:29–34. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]

Patents Granted for Licorice (root) for glutathione production enhancer, treatment of atherosclerotic diseases, hypertension, cardiovascular disease, chronic renal failure, carotid artery stenosis, coronary heart disease, hypercholesterolemia, hypertriglyceridemia, for treating canker sores, liver ailments, topical anti-inflammatory, anti-fatigue composition, for strengthening stomach and spleen, preventing or treating angioedema, and skin treatment.

US8828955, US7572470, US7201930, US7166311, US6733800, US6881427, US5455033, US5424331, US9408894, US9089583, US10576120, US10537603, US9968546.

#### **Elderberry:**

##### **Antiviral effects (of lectin, not specific to elderberry):**

- Madeleine A. M. Blich, "Methods and compositions for inhibiting the infectious activity of viruses", U.S. Pat. No. 4, 742, 046

Patents Granted for Elderberry for inhibiting infectious activity of viruses, anti-inflammatory, treatment for acne, antibacterial, using sambuca extract in a process for creating antibodies, and the management of inflammatory mucosal diseases of both viral and non-viral origin.

US4742046, US8771759, US8734857, US8632773, US7563466

#### **Olive Leaf:**

##### **Antiviral properties:**

- Renis, "In Vitro Antiviral Activity of Calcium Elenolate," *Antimicrobial Agents and Chemotherapy*-1969, pages 167-172
- "Composition for the treatment of herpes and cold sores", U.S. Pat. No. 8, 846, 114
- G. Melcher, "Method and composition for cutaneous treatment of herpes simplex infections", U.S. Pat. No. 8, 092, 843
- W. R. Fredrickson, "Method and Composition for antiviral therapy", U.S. Pat. No. 6, 117, 844

##### **Antibacterial properties:**

- "Inhibition of Salmonella enteritidis by oleuropein in broth and in a model food system," *Let Appl Microbiol* 20(2):120-4, Febuary, 1995
- "The effect of the olive phenolic compound, oleuropein, on growth and enterotoxin B U) production," *J. Appl. Bacteriology* 74(3):253-9, March, 1993

#### **Antioxidant:**





- Francesco Visioli, Claudio Galli, "Oleuropein protects low density lipoprotein from oxidation", *Life Sciences* Volume 55, Issue 24, 1994, Pages 1965-1971

Patents Granted for Olive Leaf for the treatment of cold sores and herpes virus, treatment for erythema, treating acne, cellular immunity reinforcing agent, antiviral therapy, relief from symptoms of colds and influenza, for the treatment of metabolic syndrome, for reducing skin irritation or inflammation, the promotion of the process of restoring and healing the patient by boosting his or her immune system, treatment of a dermatological microbial infection, antiviral, and treatment of psoriasis and skin disease.

US9427454, US8846114, US7192616, US7182963, US6676980, US6455580, US6455070, US9248157, US8758838, US8535737, US10525094, US9072753, US6440465, US6605296

### St. Johns Wort:

#### **Antiviral effects:**

- Meruelo D, Lavie G, Lavie D. Therapeutic agents with dramatic antiretroviral activity and little toxicity at effective doses: aromatic polycyclic diones hypericin and pseudohypericin. *Proc Natl Acad Sci USA*. 1988;85:5230–5234. doi: 10.1073/pnas.85.14.5230. [[PMC free article](#)] [[PubMed](#)] [[CrossRef](#)] [[Google Scholar](#)]
- Jacobson JM, Feinman L, Liebes L, Ostrow NA, Koslowski V, Tobia A, Cabana BE, Lee D, Spritzler J, Prince AM. Pharmacokinetics, safety, and antiviral effects of hypericin, a derivative of St. John's wort plant, in patients with chronic hepatitis C virus infection. *Antimicrob Agents Chemother*. 2001;45:517–524. doi: 10.1128/AAC.45.2.517-524.2001. [[PMC free article](#)] [[PubMed](#)] [[CrossRef](#)] [[Google Scholar](#)]
- Miskovsky P. Hypericin—a new antiviral and antitumor photosensitizer: mechanism of action and interaction with biological macromolecules. *Curr Drug Targets*. 2002;3:55–84. doi: 10.2174/1389450023348091. [[PubMed](#)] [[CrossRef](#)] [[Google Scholar](#)]
- Degar S, Prince AM, Pascual D, Lavie G, Levin B, Mazur Y, Lavie D, Ehrlich LS, Carter CA, Meruelo D. Inactivation of the human immunodeficiency virus by hypericin: evidence for photochemical alterations of p24 and a block in uncoating. *AIDS Res Hum Retrovir*. 1992;8:1929–1936. doi: 10.1089/aid.1992.8.1929. [[PubMed](#)] [[CrossRef](#)] [[Google Scholar](#)]
- Utsumi T, Okuma M, Kanno T, Takehara Y, Yoshioka T, Fujita Y, Horton AA, Utsumi K. Effect of the antiretroviral agent hypericin on rat liver mitochondria. *Biochem Pharmacol*. 1995;50:655–662. doi: 10.1016/0006-2952(95)00143-N. [[PubMed](#)] [[CrossRef](#)] [[Google Scholar](#)]
- Lavie et al. "Hypericin as an Inactivator of Infectious Viruses in Blood Components," *Transfusion* vol. 35 No. 5 pp. 392-400 1995.

#### **Anti-tumor effects:**

- Xu L., Zhang X., Cheng W., Wang Y., Yi K., Wang Z., Zhang Y., Shao L., Zhao T. Hypericin-photodynamic therapy inhibits the growth of adult T-cell leukemia cells through induction of apoptosis and suppression of viral transcription. *Retrovirology*. 2019;16:5. doi: 10.1186/s12977-019-0467-0. [[PMC free article](#)] [[PubMed](#)] [[CrossRef](#)] [[Google Scholar](#)]
- Barliya T, Mandel M, Livnat T, Weinberger D, Lavie G. Degradation of HIF-1alpha under hypoxia combined with induction of Hsp90 polyubiquitination in cancer cells by hypericin: a unique





cancer therapy. PLOS ONE. 2011;6:e22849. doi: 10.1371/journal.pone.0022849. [\[PMC free article\]](#) [\[PubMed\]](#) [\[CrossRef\]](#) [\[Google Scholar\]](#)

- J. C. Simon, et al, " Hyperforin as cytostatic agen and hyperforin ointment or cream as application form", U.S. Pat. No. 7, 179, 495

#### **Anti-inflammatory:**

- Sanchez-Mateo C C, Bonkanka C X, Hernandez-Perez M, Rabanal R M. Evaluation of the analgesic and topical anti-inflammatory effects of *Hypericum reflexum* L. fil. *J. Ethnopharmacol.* 2006; 11:107(1):1-6.
- Trovato A, Raneri E, Kouladis M, Tzakou O, Taviano M F, Galati E M. Anti-inflammatory and analgesic activity of *Hypericum empetrifolium* Willd. (Guttiferae). *Farmaco.* 2001; 56(5-7):455-7.
- Rabanal R M, Bonkanka C X, Hernandez-Perez M, Sanchez-Mateo C C. Analgesic and topical anti-inflammatory activity of *Hypericum canariense* L. and *Hypericum glandulosum* Ait. *J. Ethnopharmacol.* 2005 Jan. 15; 96(3):591-6.
- Abdel-Salam O M Anti-inflammatory, antinociceptive, and gastric effects of *Hypericum perforatum* in rats. *Scientific World Journal.* 2005 Aug. 8; 5: 586-95.

#### **Antidepressant:**

- De Smet and Nolen, 1996, *British Medical Journal* 313:241-247
- Hansgen et al., 1994, *Nervenheilkunde* 12:285-289
- Harrer et al., 1994, *J. Geriatric Psychiatry Neurology* 7:S24-28
- Hubner et al., 1994, *J. Geriatric Psychiatry Neurology* 7:S12-14
- Martinez et al., 1994, *J. Geriatric Psychiatry Neurology* 7:S29-33
- Sommer and Harrer, 1994, *J. Geriatric Psychiatry Neurology* 7:S9-11;
- Vorbach et al., 1994, *J. Geriatric Psychiatry Neurology* 7:S19-23
- Woelk et al., 1994, *J. Geriatric Psychiatry Neurology* 7:S34-38
- Andrews, E. L. (1997). In Germany, Humble Herb is a Rival to Prozac. *New York Times*, 9.
- Volz HP: Controlled clinical trials of hypericum extracts in depressed patients: an overview. *Pharmacopsychiatry* 30(suppl 2):72-76, 1997 [Medline](#), [Google Scholar](#)
- Harrer G, Schulz V: Clinical investigation of the antidepressant effectiveness of hypericum. *Journal of Geriatric Psychiatry and Neurology* 7(suppl 1):6-8, 1994 [Google Scholar](#)
- Rodriguez-Landa J F, Contreras C M. A review of clinical and experimental observations about antidepressant actions and side effects produced by *Hypericum perforatum* extracts. *Phytomedicine.* 2003 November; 10(8):688-99.
- Mennini T, Gobbi M. The antidepressant mechanism of *Hypericum perforatum*. *Life Sci.* 2004 Jul. 16; 75(9):1021-7.
- Di Carlo G, Borrelli F, Ernst E, Izzo A A. St John's Wort: Prozac from the plant kingdom. *Trends Pharmacol Sci.* 2001 June; 22(6):292-7.

#### **Anti-alzheimers:**

- G. Castillo, et al, "Methods of treating Alzheimer's disease and other amyloidoses using *Hypericum perforatum* and derivatives thereof", U.S. Pat. No. 7, 205, 008

Patents Granted for St. Johns Wort for neuropathic pain, treating Alzheimer's disease and other amyloidosis, treatment and prevention of depression, preventing anxiety, skin disease, the use of hyperforin for treating cancer diseases, topical medicament, treatment of dementia, viral disease, antidepressant, treatment and prevention of influenza, vasodilating agent, hair growth promoting



agent, appetite suppressant, and the inactivation of viral infections agents by chemiluminescence activated light sensitive compounds.

US6113907, US8906430, US7205008, US7014865, US6428820 x5, US6428819, US7179495, US7166310, US6322824, US6245362, US6224906, US8399029, US7687083, US9107811, US6346282, US5433957, US5985282 x2, US7037534.

### Ginkgo Biloba:

#### **Improve cognitive function:**

- .Kleijnen and P. Knipschild, Ginkgo biloba (Drug Profiles), the Lancet 340:1136 (1992)
- J. Krieglstein et al., European Journal of Pharmaceutical Sciences Vol. 3 (1995) 39-48
- Ozturk, et al, "The effect of Ginkgo extract EGb761 in cisplatin-induced peripheral neuropathy in mice", *Toxicology and Applied Pharmacology*, Volume 196, Issue 1, 1 April 2004, Pages 169-175
- Chen, et al, "Effect of bilobalide on peripheral nerve regeneration", *Biomaterials* Volume 25, Issue 3, February 2004, Pages 509-514
- "Use of a ginkgo complexes for the enhancement of cognitive functions and the alleviation of mental fatigue", U.S. Pat. No. 8, 591, 965

#### **Antifungal:**

- Atzori C, Bruno A, Chichino G, Bombardelli E, Scaglia M, Ghione M. Activity of bilobalide, a sesquiterpene from Ginkgo biloba, on Pneumocystis carinii. *Antimicrob Agents Chemother.* 1993 Jul;37(7):1492–1496. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]

Patents Granted for Ginkgo Biloba for treating sarcopenia, in the dent buccal sphere, improve circulation of blood in the brain, enhance cognitive functions, alleviation of mental fatigue, treatment for Tinnitus, activation of cerebral metabolism, treatment for cellulite, atopic dermatitis and recovery from mild brain injury.

US6475534, US8765196, US7569236, US7341750, US7232580, US7048954, US6488923 x2, US5158770, US8591965, US7186424, US6436449, US9592261, US8394423, US7691422, US7597915, US8475849, US8840937, US7618639.

