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## COMMITTEE ON HERBAL MEDICINAL PRODUCTS (HMPC)

### LIST OF REFERENCES FOR ASSESSMENT OF:

**Hyperici herba**  
***Hypericum perforatum* L.**  
**(St. John's wort)**

*The EMEA acknowledges that copies of the underlying works used to produce this monograph were provided for research only with exclusion of any commercial purpose.*

Agostinis, P., Vantieghem, A., Merlevede, W., de Witte PAM. Hypericin in cancer treatment: more light on the way. *Int J Biochem. Cell Biol.* 34, 221-241. 2002

Angelescu, IG., Kohnen, R., Szegedi, A., Klement, S., Kieser, M. Comparison of *Hypericum* extract WS 5570 and paroxetine in ongoing treatment after recovery from an episode of moderate to severe depression: results from a randomized multicenter study. *Pharmacopsychiatry.* 39, 213-219. 2006

Arold, G., Donath, F., Maurer, A., Diefenbach, K., Bauer, S., Henneicke-von Zepelin, H.H., Friede, M., Roots, I. No relevant interaction with alprazolam, caffeine, tolbutamide and digoxin by treatment with a low-hyperforin St John's wort extract. *Planta Med* 71, 331-337. 2005

Auster, F., Schäfer, J. *Arzneipflanzen*. Georg Thieme Verlag, Leipzig, 1958

Axarlis, S., Mentis, A., Demetzos, C., Skaltsounis, AL., Marselos, M., Malamas, M. Antiviral *in vitro* activity of *Hypericum perforatum* extract on the Human Cytomegalovirus (HCMV). *Phytother Res* 12, 507-511. 1998

Barnes, J., Anderson, LA., Phillipson, JD. *Herbal medicines*. Second Edition. Pharmaceutical Press, London, 2002

Barnes, J., Barber, N., Wheatley, D., Williamson, EM. A pilot randomised, open, uncontrolled, clinical study of two dosages of St John's wort (*Hypericum perforatum*) herb extract (LI-160) as an aid to motivational/behavioural support in smoking cessation. *Planta Med.* 72, 378-382. 2006

Baureithel, KK., Berger Büter, K., Engesser, A., Burkard, W., Schaffner, W. Inhibition of benzodiazepine binding *in vitro* by amentoflavone, a constituent of various species of *Hypericum*. *Phar Acta Helv* 72, 153-157. 1997

Beckman, SE., Sommi, RW., Switzer, J. Consumer use of St. John's wort: a survey on effectiveness, safety, and tolerability. *Pharmacotherapy*. 20, 568-574. 2000

Behnke, K., Jensen, GS., Graubaum, HJ., Gruenwald, J. *Hypericum perforatum* versus fluoxetine in the treatment of mild to moderate depression. *Adv Ther*. 19, 43-52. 2002

Beijamini, V., Andreatini, R. Effects of *Hypericum perforatum* and paroxetine on rat performance in the elevated T-maze. *Pharmacol Res*. 48, 199-207. 2003

Benedi, J., Arroyo, R., Romero, C., Martin-Aragon, S., Villar, AM. Antioxidant properties and protective effects of a standardized extract of *Hypericum perforatum* on hydrogen peroxide-induced oxidative damage in PC12 cells. *Life Sci*. 75, 1263-1276. 2004

Bergmann, R., Nüßner, J., Demling, J. Behandlung leichter bis mittelschwerer Depressionen. *TW Neurol Psychiatr*. 7, 235-240. 1993

Bernd, A., Simon, S., Ramirez Bosca, A., Kippenberger, S., Diaz Alperi, J., Miquel, J., Villalba Garcia, JF., Pamies Mira, D., Kaufmann R., Phototoxic effects of *Hypericum* extract in cultures of human keratinocytes compared with those of psoralen. *Photochem Photobiol*. 69, 218-221. 1999

Biber, A., Fischer, H., Romer, A., Chatterjee, SS. Oral bioavailability of hyperforin from *Hypericum* extracts in rats and human volunteers. *Pharmacopsychiatry*. 31, Suppl 1, 36-43. 1998

Bjerkensted, L., Edman, GV., Alken, RG., Mannel, M. *Hypericum* extract LI 160 and fluoxetine in mild to moderate depression: a randomized, placebo-controlled multi-center study in outpatients. *Eur Arch Psychiatry Clin Neurosci*. 255, 40-47. 2005

Bladt, S., Wagner, H. Inhibition of MAO by fractions and constituents of *Hypericum* extract. *J Geriatr Psychiatry Neurol*. 7, Suppl 1, 57-59. 1994

Böhme, H. Kommentar zum Europäischen Arzneibuch. Wissenschaftliche Verlagsgesellschaft, Stuttgart, 2006

Borges, LV., do Carmo Cancino, JC., Peters, VM., Las Casas, L., de Oliveira Guerra, M. Development of pregnancy in rats treated with *Hypericum perforatum*. *Phytother Res*. 19, 885-887. 2005

Bove, GM. Acute neuropathy after exposure to sun in a patient treated with St John's wort. *Lancet* 352, 1121. 1998

Bradley, P. British Herbal Compendium. Vol 2. British Herbal Medicin Association, 2006

Brenner, R., Azbel, V., Madhusoodanan, S., Pawlowska, M. Comparison of an extract of *Hypericum* (LI 160) and sertraline in the treatment of depression: a double-blind, randomized pilot study. *Clin Ther*. 22, 411-419. 2000

Butterweck, V., Brockens, T., Korte, B., Wittkowski, W., Winterhoff, H. Long-term effects of St. John's wort and hypericin on monoamine levels in rat hypothalamus and hippocampus. *Brain Res*. 930, 21-9. 2002

Butterweck, V., Jurgenliemk, G., Nahrstedt, A., Winterhoff, H. Flavonoids from *Hypericum perforatum* show antidepressant activity in the forced swimming test. *Planta Med.* 66, 3-6. 2000

Butterweck, V., Lieflander-Wulf, U., Winterhoff H, Nahrstedt A. Plasma levels of hypericin in presence of procyanidin B2 and hyperoside: a pharmacokinetic study in rats. *Planta Med.* 69, 189-192. 2003

Butterweck, V., Nahrstedt, A. Was ist bekannt über Johanniskraut? Phytochemie und Pharmakologie. *Pharmazie in unserer Zeit.* 32, 212. 2003

Butterweck, V., Petereit, F., Winterhoff, H., Nahrstedt, A. Solubilized hypericin and pseudohypericin from *Hypericum perforatum* exert antidepressant activity in the forced swimming test. *Planta Med.* 64, 291-294. 1998

Capasso, R., Borrelli, F., Montanaro, V., Altieri, V., Capasso, F., Izzo, AA. Effects of the antidepressant St. John's wort (*Hypericum perforatum*) on rat and human vas deferens contractility. *J Urol.* 173, 2194-2197. 2005

Calapai, G., Crupi, A., Firenzuoli, F., Interrera, G., Squadrito, F., Parisi, A., De Sarro, G., Caputi, A. Serotonin, norepinephrine and dopamine involvement in the antidepressant action of *Hypericum perforatum*. *Psychopharmacology.* 34, 45-49. 2001

Catania, MA., Firenzuoli, F., Crupi, A., Mannucci, C., Caputi, AP., Calapai, G. *Hypericum perforatum* attenuates nicotine withdrawal signs in mice. *Psychopharmacology.* 169, 186-189. 2003

Cervo, L., Roizo, M., Ekalle-Soppo, CB., Guiso, G., Morazzoni, P., Caccia, S. Role of hyperforin in the antidepressant-like activity of *Hypericum perforatum* extracts. *Psychopharmacology.* 164, 423-428. 2002

Chatterjee. SS., Bhattacharya. SK., Wonnemann. M., Singer. A., Müller. WE. Hyperforin as a possible antidepressant component of *Hypericum* extracts. *Life Sci.* 63, 499-510. 1998

Chung, DJ., Kim, HY., Park, KH., Jeong, KA., Lee, SK., Lee, YI., Hur, SE., Cho, MS., Lee, BS., Bai, SW., Kim, CM., Cho, SH., Hwang, JY., Park, JH. Black Cohosh and St. John's Wort (GYNO-Plus(R)) for Climacteric Symptoms. *Yonsei Med J.* 48, 289-294. 2007

Commission E monographs. The Complete German Commission E Monographs. American Botanical Council, Austin, 1998

Coskun, I., Tayfun Uzbay, I., Ozturk, N., Ozturk, Y. Attenuation of ethanol withdrawal syndrome by extract of *Hypericum perforatum* in Wistar rats. *Fundam Clin Pharmacol.* 20, 481-488. 2006

DAC, Deutscher Arzneimittel Codex. J010 Hyperici herba. Deutscher Apotheker-Verlag, Stuttgart, 1991-1999

De Vry, J., Maurel, S., Schreiber, R., de Beun, R., Jentzsch, KR. Comparison of *Hypericum* extracts with imipramine and fluoxetine in animal models of depression and alcoholism. *Eur Neuropsychopharmacol.* 9, 461-468. 1999

Dimpfel, W. Electropharmacogram from quercetin is similar to that of moclobemide and other antidepressant drugs. *Z Phytother.* 29, S6. 2008

Dinamarca, MC., Cerpa, W., Garrido, J., Hancke, JL., Inestrosa, N.. Hyperforin prevents beta-amyloid neurotoxicity and spatial memory impairments by disaggregation of Alzheimer's amyloid-beta-deposits. *Mol Psychiatry.* 11, 1032-1048. 2006

Dingermann, T., Hiller, K., Schneider, G., Zündorfer, I. Schneider Arzneidrogen. Elesvier, München, 2004

Dugoua, JJ., Mill, E., Perri, D., Koren, G. Safety and efficacy of St. John's wort (*Hypericum*) during pregnancy and lactation. Can J Clin Pharmacol. 13, 268-276. 2006

Duke, JA. Handbook of Medicinal Herbs. CRP Press LLC, 2002

Eckert, GP., Muller, WE. Effects of hyperforin on the fluidity of brain membranes. Pharmacopsychiatry. 34, 22-25. 2001

Ellis, KA., Stough, C., Vitetta, L., Heinrich, K., Nathan, PJ. An investigation into the acute nootropic effects of *Hypericum perforatum* L. (St. John's Wort) in healthy human volunteers. Behav Pharmacol. 12, 173-182. 2001

El-Sherbiny, DA., Khalifa, AE., Attia, AS., Eldenshary Eel, D. *Hypericum perforatum* extract demonstrates antioxidant properties against elevated rat brain oxidative status induced by amnestic dose of scopolamine. Pharmacol Biochem Behav. 76, 525-533. 2003

Ergänzungsbuch zum Deutschen Arzneibuch (Erg.-B6). Deutscher Apotheker-Verlag, Berlin, 1941

ESCOP Monograph. Hyperici herba (St. John's Wort). ESCOP Monographs Second edition. ESCOP 2003

Fava, M., Alpert, J., Nierenberg, AA., Mischoulon, D., Otto, MW., Zajecka, J., Murck, H., Rosenbaum, JF. A Double-blind, randomized trial of St John's wort, fluoxetine, and placebo in major depressive disorder. J Clin Psychopharmacol. 25, 441-447. 2005

Findling, RL., McNamara, NK., O'Riordan, MA., Reed, MD., Demeter, CA., Branicky, LA., Blumer, JL. An open-label pilot study of St. John's wort in juvenile depression. J Am Acad Child Adolesc Psychiatry. 42, 908-914. 2003

Fischer, B., Hartwich, C. Handbuch der pharmazeutischen Praxis. Verlag Julius Springer, Berlin, 1902

Flamm, S., Kroeber, L., Seel, H. Pharmakodynamik Deutscher Heilpflanzen. Hippocrates Verlag, Stuttgart, 1940

Flausino, OA. Jr., Zangrossi, H.Jr., Salgado, JV., Viana, MB. Effects of acute and chronic treatment with *Hypericum perforatum* L. (LI 160) on different anxiety-related responses in rats. Pharmacol Biochem Behav. 71, 251-257. 2002

Fox, E., Murphy, RF., McCully, CL., Adamson, PC. Plasma pharmacokinetics and cerebrospinal fluid penetration of hypericin in nonhuman primates. Cancer Chemother Pharmacol. 47, 41-44. 2001

Frerichs, G., Arends, G., Zörnig, H. Handbuch der pharmazeutischen Praxis. Verlag Julius Springer, Berlin, 1938

Friede, M. Henneicke von Zepelin, HH., Freudenstein, J. Differential therapy of mild to moderate depressive episodes (ICD-10 F 32.0; F 32.1) with St. John's wort. Pharmacopsychiatry. 34, 38-41. 2001

Froestl, B., Steiner, B., Muller, WE. Enhancement of proteolytic processing of the beta-amyloid precursor protein by hyperforin. Biochem Pharmacol. 66, 2177-2184. 2003

Gastpar, M., Singer, A., Zeller, K. Comparative efficacy and safety of a once-daily dosage of *Hypericum* extract STW3-VI and citalopram in patients with moderate depression: a double-blind, randomised, multicentre, placebo-controlled study. *Pharmacopsychiatry*. 39, 66-75. 2006

Gastpar, M., Singer, A., Zeller, K. Efficacy and tolerability of *Hypericum* extract STW3 in long-term treatment with a once-daily dosage in comparison with sertraline. *Pharmacopsychiatry*. 38, 78-86. 2005

Genovese, T., Mazzon, E., Di Paola, R., Muia, C., Crisafulli, C., Menegazzi, M., Malleo, G., Suzuki, H., Cuzzocrea, S. *Hypericum perforatum* attenuates the development of cerulein-induced acute pancreatitis in mice. *Shock*. 25, 161-167. 2006

Genovese, T., Mazzon, E., Menegazzi, M., Di Paola, R., Muia, C., Crisafulli, C., Bramanti, P., Suzuki, H., Cuzzocrea, S. Neuroprotection and enhanced recovery with *Hypericum perforatum* extract after experimental spinal cord injury in mice. *Shock*. 25, 608-617. 2006

Gerlach, S. *Hypericum*. PhD Thesis, University Vienna, 2008

Gibbons, S., Ohlendorf, B., Johnsen, I. The genus *Hypericum*-a valuable resource of anti-Staphylococcal leads. *Fitoterapia*. 73, 300-304. 2002

Gobbi, M., Moia, M., Pirona, L., Morizzoni, P., Minnini, T. *In vitro* binding studies with two *Hypericum perforatum* extracts-hyperforin, hypericin and biapigenin-on 5-HT6, 5-HT7, GABA(A)/benzodiazepine, sigma, NPY-Y1/Y2 receptors and dopamine transporters. *Pharmacopsychiatry*. 34, Suppl 1, 45-48. 2001

Greeson, JM., Sanford, B., Monti, DA. St. John's wort (*Hypericum perforatum*): a review of the current pharmacological, toxicological, and clinical literature. *Psychopharmacology*. 153, 402-414. 2001

Gregoretti, B., Stebel, M., Candussio, L., Crivellato, E., Bartoli, F., Decorti, G. Toxicity of *Hypericum perforatum* (St. John's wort) administered during pregnancy and lactation in rats. *Toxicol Appl Pharmacol*. 200, 201-205. 2004

Grube, B., Grünwald, J., Walper, A., Hopfenmüller, W. Johanniskraut bei leichten temporären Verstimmungen. *Naturamed* 11, 21-27. 1996

Grube, B., Walper, A., Wheatley, D. St. John's Wort extract: efficacy for menopausal symptoms of psychological origin. *Adv Ther*. 16, 177-186. 1999

Gruenwald, J., Brendler, T., Jaenicke, C. *PDR for Herbal Medicines*. Medical Economics Company, Montvale, 1998

Gruenwald, J., Brendler, T., Jaenicke, C. *PDR for Herbal Medicines*. Medical Economics Company, Montvale, 2004

Grundmann, O., Kelber, O., Butterweck, V. Effects of St. John's wort extract and single constituents on stress-induced hyperthermia in mice. *Planta Med*. 72, 1366-1371. 2006

Gutmann, H., Poller, B., Berger Büter, K., Pfrunder, A., Schaffner, W., Drewe, J. *Hypericum perforatum*: which constituents may induce intestinal MDR1 and CYP3A4 mRNA expression? *Planta Med* 72, 685-690: 2006

Häberlein H., Prenner L., Zeller K. Einfluss von Hyperosid und Hyperforin auf die Regulation und laterale Mobilität von beta1-adrenergen Rezeptoren an lebenden C6-Glioblastomzellen: ein postsynaptischer Ansatz zum Wirkmechanismus von Johanniskraut. *Z Phytother*. 29, 8, 2008

Hager CD-Rom, Blaschek, W., Ebel, S., Hackenthal, E., Holzgrabe, U., Keller, K., Reichluing, J., Schulz, V. HagerROM. Springer Verlag, Berlin, Heidelberg, 2006

Hager, H. Hager's Handbuch der pharmazeutischen Praxis. Verlag Julius Springer, Berlin, 1878

Hamacher, H., Wahl, MA. Selbstmedikation. 10. Ergänzungslieferung, Deutscher Apotheker Verlag Stuttgart, 2006

Hamacher, H., Wahl, MA. Selbstmedikation. 8. Ergänzungslieferung, Deutscher Apotheker Verlag Stuttgart, 2001

Hamacher, H., Wahl, MA. Selbstmedikation. 9. Ergänzungslieferung, Deutscher Apotheker Verlag Stuttgart, 2003

Hammerness, P., Basch, E., Ulbricht, C., Barrette, E.P., Foppa, I., Basch, S., Bent, S., Boon, H., Ernst, E. St. John's wort: A systematic review of adverse effects and drug interactions for the consultation psychiatrist. Psychosomatics 44(4), 271-282. 2003

Hänsel, R. Kapitel 10, Teedrogen. Wissenschaftliche Verlagsgesellschaft mbH, Stuttgart, 1993

Hänsel, R., Keller, K., Rimpler, H., Schneider, G. Drogen E-O. Springer Verlag, Berlin, 1993

Hänsel, R., Sticher, O. Pharmakognosie – Phytopharmazie. Springer Medizin Verlag, Heidelberg, 2007

Hänsel, R., Sticher, O. Pharmakognosie – Phytopharmazie. Springer Medizin Verlag, Heidelberg, 1972

Hänsgen, KD, Vesper, J, Antidepressive Wirksamkeit eines hochdosierten *Hypericum*-Extrakts. Münchener Medizinische Wochenschrift 138, 29-33, 1996

Hänsgen, KD, Vesper, J, Ploch, M, Multicenter double-blind study examining the antidepressant effectiveness of the *Hypericum* extract LI 160. J Geriatr Psychiatr Neurol 7, 15-18. 1994

Harrer, G, Hübner WD, Podzuweit H, Effectiveness and tolerance of the *Hypericum* extract LI 160 compared to maprotiline: a multicenter double-blind study. J Geriatr Psychiatr Neurol 7, 24-28. 1994

Harrer, G., Sohmidt, K., Kuhn, K., Biller, A., Comparison of equivalence between the St. John's wort extract LoHyp-57 and fluoxetine. Arzneim-Forsch/Drug Res. 49, 289-296. 1999

He, YY., Chignell, CF., Miller, DS., Andley, UP., Roberts, JE. Phototoxicity in human lens epithelial cells promoted by St. John's Wort. Photochem Photobiol. 80, 583-586. 2004

Heinrich, M., Barnes, J., Gibbons, S., Williamson, E. Fundamentals of Pharmacognosy and Phytotherapie. Elsevier Science Limited, 2004

Henderson, L., Yue, Q.Y., Bergquist, C., Gerden, B., Arlett, P. St John's wort (*Hypericum perforatum*): Drug interactions and clinical outcomes. Br J Clin Pharmacol. 54, 349-356. 2002

Hicks, SM., Walker, AF., Gallagher, J., Middleton, RW., Wright, J. The significance of "nonsignificance" in randomized controlled studies: a discussion inspired by a double-blinded study on St. John's wort (*Hypericum perforatum* L.) for premenstrual symptoms. J Altern Complement Med. 10, 925-932. 2004

Hoffmann, J., Kühl, ED. Therapie von depressiven Zuständen mit *Hypericum*. Ztschr Allgmed. 55, 776-782. 1979

Hubner, WD., Kirste, T. Experience with St John's Wort (*Hypericum perforatum*) in children under 12 years with symptoms of depression and psychovegetative disturbances. Phytother Res. 15, 367-370. 2001

Hunt, EJ., Lester, CE., Lester, EA., Tackett, RL. Effect of St. John's wort on free radical production. Life Sci. 69, 181-190. 2001

*Hypericum* Depression Trial Study Group. Effect of *Hypericum perforatum* (St John's wort) in major depressive disorder: a randomized controlled trial. JAMA. 287, 1807-1814. 2002

Imai, H., Kotegawa, T., Tsutsumi, K., Morimoto, T., Eshima, N., Nakan, S., Ohashi, K. The recovery time-course of CYP3A after induction by St John's wort administration. Br J Clin Pharmacol 65, 701-707. 2008

Irion, H. Drogisten-Lexikon. Springer Verlag, Berlin/Göttingen/Heidelberg, 1955

Ivetic, V., Popovic, M., Mimica-Dukic, N., Barak, O., Pilija, V. St. John's wort (*Hypericum perforatum* L.) and kindling epilepsy in rabbit. Phytomedicine. 9, 496-499. 2002

Izzo, AA. Drug interactions with St. John's Wort (*Hypericum perforatum*): a review of the clinical evidence. Int J Clin Pharmacol Ther. 42, 139-148. 2004

Jang, MH., Lee, TH., Shin, MC., Bahn, GH., Kim, JW., Shin, DH., Kim, EH., Kim, CJ. Protective effect of *Hypericum perforatum* Linn (St. John's wort) against hydrogen peroxide-induced apoptosis on human neuroblastoma cells. Neurosic Lett. 329. 177-180. 2002

Johne, A., Perloff, ES., Bauer, S., Schmider, J., Mai, I., Brockmoller, J., Roots, I. Impact of cytochrome P-450 inhibition by cimetidine and induction by carbamazepine on the kinetics of hypericin and pseudohypericin in healthy volunteers. Eur J Clin Pharmacol. 60, 617-622. 2004

Juergenliemk, G., Boje, K., Huewel, S., Lohmann, C., Galla, HJ., Nahrstedt, A. *In vitro* studies indicate that miquelianin (quercetin 3-O-beta-D-glucuronopyranoside) is able to reach the CNS from the small intestine. Planta Med. 69, 1013-1017. 2003

Kalb, R., Trautmann-Sponsel, RD., Kieser, M. Efficacy and tolerability of *Hypericum* extract WS 5572 versus placebo in mildly to moderately depressed patients. A randomized double-blind multicenter clinical trial. Pharmacopsychiatry. 34, 96-103. 2001

Kaltschmidt, B., Heinrich, M., Kaltschmidt, C. Stimulus-dependent activation of NF-kappaB specifies apoptosis or neuroprotection in cerebellar granule cells. Neuromolecular Med. 2, 299-309. 2002

Kamuhabwa, AR., Augustijns, P., de Witte, PA. *In vitro* transport and uptake of protohypericin and hypericin in the Caco-2 model. Int J Pharm. 188, 81-86. 1999

Karalapillai, D., Bellomo, R. Convulsions associated with an overdose of St. John's wort. Med J Austr 186(4), 213-214. 2007

Karsten, Weber, Fischer. Lehrbuch der Pharmakognosie. Gustav Fischer Verlag, Stuttgart, 1962

Kasper, S., Anhelescu, IG., Szegedi, A., Dienel, A., Kieser, M. Superior efficacy of St John's wort extract WS 5570 compared to placebo in patients with major depression: a randomized, double-blind, placebo-controlled, multi-center trial. *BMC Med.* 4, 14. 2006

Kasper, S., Volz, H.P., Moller, H.J., Dienel, A. Kieser, M. Continuation and long-term maintenance treatment with *Hypericum* extract WS 5570 after recovery from an acute episode of moderate depression – A double-blind, randomized, placebo controlled long-term trial. *Eur Neuropsychopharmacol* Aug 9. 2008

Khalifa, AE. *Hypericum perforatum* as a nootropic drug: enhancement of retrieval memory of a passive avoidance conditioning paradigm in mice. *J Ethnopharmacol.* 76, 49-57. 2001

Kentsch, U., Burgi, S., Ruedeberg, C., Probst, S., Honegger, UE. St. John's wort extract Ze 117 (*Hypericum perforatum*) inhibits norepinephrine and serotonin uptake into rat brain slices and reduces 3-adrenoceptor numbers on cultured rat brain cells. *Pharmacopsychiatry.* 34, Suppl 1, 56-60. 2001

Klier, CM., Schmid-Siegel, B., Schafer, MR., Lenz, G., Saria, A., Lee, A., Zernig, G. St. John's wort (*Hypericum perforatum*) and breastfeeding: plasma and breast milk concentrations of hyperforin for 5 mothers and 2 infants. *J Clin Psychiatry.* 67, 305-309. 2006

Klusa, V., Germane, S., Noldner, M., Chatterjee, SS. *Hypericum* extract and hyperforin: memory-enhancing properties in rodents. *Pharmacopsychiatry.* 34, 61-69. 2001

Kumar, V., Jaiswal, AK., Singh, PN., Bhattacharya, SK. Anxiolytic activity of Indian *Hypericum perforatum* Linn: an experimental study. *Indian J Exp Biol.* 38, 36-41. 2000

Kumar, V., Khanna, VK., Seth, PK., Singh, PN., Bhattacharya, SK. Brain neurotransmitter receptor binding and nootropic studies on Indian *Hypericum perforatum* Linn. *Phytother Res.* 16, 210-216. 2002

Kumar, V., Singh, PN., Muruganandam, AV., Bhattacharya, SK. Effect of Indian *Hypericum perforatum* Linn on animal models of cognitive dysfunction. *J Ethnopharmacol.* 72, 119-128. 2000

Laakmann, G., Jahn, G., Schule, C. *Hypericum perforatum* extract in treatment of mild to moderate depression. Clinical and pharmacological aspects. *Nervenarzt.* 73, 600-612. 2002

Laakmann, G., Schule, C., Baghai, T., Kieser, M. St. John's wort in mild to moderate depression: the relevance of hyperforin for the clinical efficacy. *Pharmacopsychiatry.* 31, 54-59. 1998

Laggner, H., Schreier, S., Hermann, M., Exner, M., Muhl, A., Gmeiner, BM., Kapiotis, S. The main components of St John's Wort inhibit low-density lipoprotein atherogenic modification: a beneficial "side effect" of an OTC antidepressant drug? *Free Radic Res.* 41, 234-241. 2007

Länger, R., Kubelka, W., Phytokodex. Krause & Pachernegg GmbH, Gablitz, 2001

Lavie, G., Mazur, Y., Lavie, D., Meruelo, D. The chemical and biological properties of hypericin – a compound with a broad spectrum of biological activities. *Med Res Rev* 15, 111-119. 1995

Lecrubier, Y., Clerc, G., Didi, R. Kieser, M. Efficacy of St. John's wort extract WS 5570 in major depression: a double-blind, placebo-controlled trial. *Am J Psychiatry.* 159, 1361-1366. 2002

Lenoir, S., Degener, FH., Saller, R. A double-blind randomised trial to investigate three different concentrations of a standardised fresh plant extract obtained from the shoot tips of *Hypericum perforatum* L. *Phytomedicine.* 6, 141-146. 1999

Leuschner, J. Preclinical toxicological profile of *Hypericum* extract LI 160. Abstracts of the 2<sup>nd</sup> International Conference on Phytotherapy, Munich. SL 80, 1996

Linde, K., Berner, M., Egger, M., Mulrow, C. St John's wort for depression: meta-analysis of randomised controlled trials. Br J Psychiatry. 186, 99-107. 2005

Linde, K. Johanniskraut bei Depression – eine Übersicht der randomisierten Studien bezogen auf einzelne Extrakte. [http://www.phytotherapie-komitee.de/Forschung/kfn\\_hyperi\\_281206.pdf](http://www.phytotherapie-komitee.de/Forschung/kfn_hyperi_281206.pdf), 2007

List, PH., Hörhammer, L. Hager` s Handbuch der pharmazeutischen Praxis. Springer Verlag, Berlin/Heidelberg, 1976

Lu, YH., Du, CB., Liu, JW., Hong, W., Wei, DZ. Neuroprotective effects of *Hypericum perforatum* on trauma induced by hydrogen peroxide in PC12 cells. Am J Chin Med. 32, 397-405. 2004

Madabushi, R., Frank, B., Drewelow, B., Derendorf, H., Butterweck, V. Hyperforin in St. John's wort drug interactions. Eur J Clin Pharmacol. 62, 225-233. 2006

Madaus, G. Lehrbuch der biologischen Heilmittel. Band II. Georg Thieme Verlag, Leipzig, 1938

Maisenbacher, P., Kovar, KA. Analysis and stability of Hyperici oleum. Planta Med. 58, 351-354. 1992

Mannel, M. Drug interactions with St John's wort : mechanisms and clinical implications. Drug Saf. 27, 773-797. 2004

Mannucci, C., Pieratti, A., Firenzuoli, F., Caputi, AP., Calapai, G. Serotonin mediates beneficial effects of *Hypericum perforatum* on nicotine withdrawal signs. Phytomedicine. 14, 645-651.2007

Martindale. The complete drug references. Pharmaceutical Press, London, 2002

Meier, B. Vergleichbarkeit von Phytopharmaka am Beispiel von Johanniskraut. In: Loew, D., Blume, H., Dingermann Th. Phytopharmaka V, Steinkopff, Darmstadt, 1999

Mills, E., Montori, VM., Wu, P., Gallicano, K., Clarke, M., Guyatt, G. Interaction of St John's wort with conventional drugs: systematic review of clinical trials. BMJ. 329, 23-30. 2004

Misane, I., Ogren, SO. Effects of *Hypericum perforatum* (St. John's wort) on passive avoidance in the rat: evaluation of potential neurochemical mechanisms underlying its antidepressant activity. Pharmacopsychiatry. 34, Suppl 1, 89-97. 2001

Mohanasundari, M., Sabesan, M. Modulating effect of *Hypericum perforatum* extract on astrocytes in MPTP induced Parkinson's disease in mice. Eur Rev Med Pharmacol Sci. 11, 17-20. 2007

Mohanasundari, M., Srinivasan, MS., Sethupathy, S., Sabesan, M. Enhanced neuroprotective effect by combination of bromocriptine and *Hypericum perforatum* extract against MPTP-induced neurotoxicity in mice. J Neurol Sci. 249, 140-144. 2006

Montgomery, SA., Hübner, WD., Grigoleit, HG. Efficacy and tolerability of St. John's wort extract compared with placebo in patients with mild to moderate depressive disorder. Phytomedicine. 7, Suppl 2, 107. 2000

Moreno, RA., Teng, CT., Almeida, KM., Tavares Junior, H. *Hypericum perforatum* versus fluoxetine in the treatment of mild to moderate depression: a randomized double-blind trial in a Brazilian sample. Rev Bras Psiauiatr. 28, 29-32. 2006

Mueller, SC., Majcher-Peszynska, J., Uehleke, B., Klammt, S., Mundkowski, RG., Miekisch, W., Sievens, H., Bauer, S., Frank, B., Kundt, G., Drewelow, B. The extent of induction of CYP3A by St. John's wort varies among products and is linked to hyperforin dose. Eur J Clin Pharmacol. 62, 29-36. 2006

Muller, T., Mannel, M., Murck, H., Rahlf, VW. Treatment of somatoform disorders with St. John's wort: a randomized, double-blind and placebo-controlled trial. Psychosom Med. 66, 538-547. 2004

Müller, WE., Rolli, M., Schäfer, C., Hafner, U. Effects of *Hypericum* extract (LI 160) in biochemical models of antidepressant activity. Pharmacopsychiatry. 30, Suppl 2, 102-107. 1997

Müller, W.E., Singer, A., Wonnemann, M, Hafner, U. Rolli, M., Schäfer, C. Hyperforin represents the neurotransmitter reuptake inhibiting constituent of *Hypericum* extract. Pharmacopsychiatry 31, Suppl. 16-21. 1998

Murck, H., Fava, M., Alpert, J., Nierenberg, AA., Mischoulon, D., Otto, MW., Zajecka, J., Mannel, M., Rosenbaum, JF. *Hypericum* extract in patients with MDD and reversed vegetative signs: re-analysis from data of a double-blind, randomized trial of *Hypericum* extract, fluoxetine, and placebo. Int J Neuropsychopharmacol. 8, 215-221.2005

Murck, H., Spitznagel, H., Ploch, M., Seibel, K., Schaffler, K. *Hypericum* extract reverses S-ketamine-induced changes in auditory evoked potentials in humans - possible implications for the treatment of schizophrenia. Biol Psychiatry. 59, 440-445. 2006

Nöldner, M., Schötz, K. Rutin is essential for the antidepressant activity of *Hypericum perforatum* extracts in the forced swimming test. Planta Med. 68, 577-580. 2002

Okpanyi, SN., Lizba, H., Scholl, BC., Miltenburger, HG. Genotoxicity of a standardized *Hypericum* extract. Arzneimittelforschung. 40, 851-855. 1990

Ondrizek, RR., chan, PJ., Patton, WC., King, A. An alternative medicine study of herbal effects on the penetration of zona-free hamster oocytes and the integrity of sperm deoxyribonucleic acid. Fertil Steril. 71, 517-522. 1999

Ozturk, N., Korkmaz, S., Ozturk Y. Wound-healing activity of St. John's Wort (*Hypericum perforatum* L.) on chicken embryonic fibroblasts. J Ethnopharmacol. 111, 33-39. 2006

Pal, D., Mitra, AK. MDR- and CYP3A4-mediated drug-herbal interactions. Life Sci. 78, 2131-2145. 2006

Panossian, A.G., Gabrielian, E., Manvelian, V., Jurcic, K., Wagner, H. Immunosuppressive effects of hypericin on stimulated human leukocytes: inhibition of the arachidonic acid release, leukotriene B<sub>4</sub> and interleukin-1 $\alpha$  production and activation of nitric oxide formation. Phytomed. 3, 19-28. 1996

Paulke, A., Nöldner, M., Schubert-Zsilavecz, M., Wurglics, M. St. John's wort flavonoids and their metabolites show antidepressant activity and accumulate in brain after multiple oral dose. Pharmazie 63, 296-302. 2008

Perfumi, M., Ciccocioppo, R., Angeletti, S., Cucculelli, M. Massi, M. Effects of *Hypericum perforatum* extraction on alcohol intake in Marchigian Sardinian alcohol-preferring rats. Alcohol Alcohol. 34, 690-698. 1999

Perfumi, M., Mattioli, L., Cucculetti, M., Massi, M. Reduction of ethanol intake by chronic treatment with *Hypericum perforatum*, alone or combined with naltrexone in rats. *J Psychopharmacol.* 19, 448-454. 2005

Perfumi, M., Mattioli, L., Forti, L., Massi, M., Ciccioppo, R. Effect of *Hypericum perforatum* CO2 extract on the motivational properties(Wirksamkeit) of ethanol in alcohol-preferring rats. *Alcohol Alcohol.* 40, 291-296. 2005

Perfumi, M., Panocka, I., Ciccioppo, R., Vitali, D., Froldi, R., Massi, M. Effects of a methanolic extract and a hyperforin-enriched CO2 extract of *Hypericum perforatum* on alcohol intake in rats. *Alcohol Alcohol.* 36, 199-206. 2001

Perfumi, M., Santoni, M., Cippitelli, A., Ciccioppo, R., Froldi, R., Massi, M. *Hypericum perforatum* CO2 extract and opioid receptor antagonists act synergistically to reduce ethanol intake in alcohol-preferring rats. *Alcohol Clin Exp Res.* 27, 1554-1562. 2003

Philipp, M., Kohnen, R., Hiller, KO. *Hypericum* extract versus imipramine or placebo in patients with moderate depression: randomised multicentre study of treatment for eight weeks. *BMJ.* 319,1534-1538. 1999

Poginsky, B., Westendorf, J., Prosenc, N., Kuppe, M., Marquardt, H. *Dtsch Apoth Ztg.* 128, 1364-1366. 1988

Randlov, C., Mehlsen, J., Thomsen, CF., Hedman, C., von Fircks, H., Winther, K. The efficacy of St. John's Wort in patients with minor depressive symptoms or dysthymia-a double-blind placebo-controlled study. *Phytomedicine.* 13, 215-221. 2006

Rayburn, WF., Gonzalez, CL., Christensen, HD., Harkins, TL., Kupiec, TC. Impact of *Hypericum* (St.-John's-wort) given prenatally on cognition of mice offspring. *Neurotoxicol Teratol.* 23, 629-637. 2001

Rezvani, AH., Overstreet, DH., Yang, Y., Clark, E. Jr. Attenuation of alcohol intake by extract of *Hypericum perforatum* (St. John's Wort) in two different strains of alcohol-preferring rats. *Alcohol Alcohol.* 34, 699-705. 1999

Roder, C., Schaefer, M., Leucht, S. Meta-analysis of effectiveness and tolerability of treatment of mild to moderate depression with St. John's Wort. *Fortschr Neurol Psychiatr.* 72, 330-343. 2004

Rychlik, R., Siedentop, H., von den Driesch, V., Kasper, S. St. John's wort extract WS 5572 in minor to moderately severe depression. Effectiveness and tolerance of 600 and 1200 mg active ingredient daily. *Fortschr Med Orig.* 119, 119-128. 2001

Sanchesz-Reus, MI., Gomez del Rio MA., Iglesias, I., Elorza, M., Slowing, K., Benedi, J. Standardized *Hypericum perforatum* reduces oxidative stress and increases gene expression of antioxidant enzymes on rotenone-exposed rats. *Neuropharmacology.* 52, 606-616. 2007

Sattler, S., Schaefer, U., Schneider, W., Hoelzl, J., Lehr, CM. Binding, uptake, and transport of hypericin by Caco-2 cell monolayers. *J Pharm Sci.* 86, 1120-1126. 1997

Schempp, CM., Ludtke R., Winghofer, B., Simon, JC. Effect of topical application of *Hypericum perforatum* extract (St. John's wort) on skin sensitivity to solar simulated radiation. *Photodermatol Photoimmunol Photomed.* 16, 125-128. 2000

Schempp, CM., Muller, K., Winghofer, B., Schulte-Monting, J., Simon, JC. Single-dose and steady-state administration of *Hypericum perforatum* extract (St John's Wort) does not influence skin sensitivity to UV radiation, visible light, and solar-simulated radiation. Arch Dermatol. 137, 512-513. 2001

Schempp, CM., Simon-Haarhaus, B., Simon, JC. Phototoxic and apoptosis-inducing capacity of pseudohypericin. Planta Med. 68, 171-173. 2002

Schempp, CM., Windeck, T., Hezel, S., Simon, JC. Topical treatment of atopic dermatitis with St. John's wort cream-a randomized, placebo controlled, double blind half-side comparison. Phytomedicine. 10, 31-37. 2003

Schempp, CM., Winghofer, B., Langheinrich, M., Schopf, E., Simon, JC. Hypericin levels in human serum and interstitial skin blister fluid after oral single-dose and steady-state administration of *Hypericum perforatum* extract (St. John's wort). Skin Pharmacol Appl Skin Physiol. 12, 299-304. 1999

Schempp, CM., Winghofer, B., Lüdtke, R., Simon-Haarhaus, B., Schopf, E., Simon, JC. Topical application of St John's wort (*Hypericum perforatum* L.) and of its metabolite hyperforin inhibits the allostimulatory capacity of epidermal cells. Br J Dermatol. 142, 979-984. 2000

Schempp, CM., Winghofer, B., Müller, K., Schulte-Monting, J., Mannel, M., Schopf, E., Simon, JC. Effect of oral administration of *Hypericum perforatum* extract (St. John's Wort) on skin erythema and pigmentation induced by UVB, UVA, visible light and solar simulated radiation. Phytother Res. 17, 141-146. 2003

Schey, KL., Patat, S., Chignell, CF., Datillo, M., Wang, RH., Roberts, JE. Photooxidation of lens alpha-crystallin by hypericin (active ingredient in St. John's Wort). Photochem Photobiol. 72, 200-203. 2000

Schimmer, O., Häfele, E., Krüger, A. The mutagenic potencies of plant extracts containing quercetin in *Salmonella typhimurium* TA98 and TA100. Mutat Res. 206, 201-208. 1988

Schmitt, LA., Liu, Y., Murphy, PA., Birt, DF. Evaluation of the light-sensitive cytotoxicity of *Hypericum perforatum* extracts, fractions, and pure compounds. J Agric Food Chem. 54, 2881-2890. 2006

Schmitt, LA., Liu, Y., Murphy, PA., Petrich, JW., Dixon, PM., Birt, DF. Reduction in hypericin-induced phototoxicity by *Hypericum perforatum* extracts and pure compounds. J Photochem Photobiol B. 85, 118-130. 2006

Schneider, G. Arzneidrogen, Wissenschaftsverlag, Mannheim, 1990

Schrader, E. Equivalence of St John's wort extract (Ze 117) and fluoxetine: a randomized, controlled study in mild-moderate depression. Int Clin Psychopharmacol. 15, 61-68. 2000

Schrader, E., Meier, B., Brattström, A. *Hypericum* treatment of mild-moderate depression in a placebo-controlled study. A prospective, double-blind, randomized, placebo-controlled, multicentre study. Human Psychopharmacology. 13, 163-169. 1998

Schulz, HU., Schurer, M., Bassler, D., Weiser, D. Investigation of the effect on photosensitivity following multiple oral dosing of two different *Hypericum* extracts in healthy men. Arzneimittelforschung. 56, 212-221. 2006

Schulz, V., Schurer, M., Bassler, B., Weiser, D. Investigation of pharmacokinetic data of hypericin, pseudohypericin, hyperforin and the flavonoids quercetin and isorhamnetin revealed from single and

multiple oral dose studies with a *Hypericum* extract containing tablet in healthy male volunteers. Arzneimittelforschung. 55, 561-568. 2005

Shelton, RC., Keller, MB., Gelenberg, A., Dunner, DL., Herschfeld, R., Thase, ME., Russell, J., Lydiard, RB., Crits-Cristoph, P., Gallop, R., Todd, L., Hellerstein, D., Goodnick, P., Keitner, G., Stahl, SM., Halbreich, U. Effectiveness of St John's wort in major depression: a randomized controlled trial. JAMA. 285, 1978-1986. 2001

Siepmann, M., Kirch, W., Krause, S., Joraschky, P., Muek-Weymann, M. The effects of St. John's wort extract and amitriptyline on autonomic responses of blood vessels and sweat glands in healthy volunteers. J Clin Psychopharmacol. 24, 79-82. 2004

Siepmann, M., Krause, S., Joraschky, P., Muck-Weymann, M., Kirch, W. The effects of St John's wort extract on heart rate variability, cognitive function and quantitative EEG: a comparison with amitriptyline and placebo in healthy men. Br J Pharmacol. 54, 272-282. 2002

Silva, BA., Dias, AC., Ferreres, F., Malva, JO., Oliveira, CR. Neuroprotective effect of *H. perforatum* extracts on beta-amyloid-induced neurotoxicity. Neurotox Res. 6, 119-130. 2004

Simbrey, K., Winterhoff, H., Butterweck, V. Extracts of St. John's wort and various constituents affect beta-adrenergic binding in rat frontal cortex. Life Sci. 74, 1027-1038. 2004

Simmen, U., Schweitzer, C., Burkard, W., Schaffner, W., Lundstrom, K. *Hypericum perforatum* inhibits the binding of  $\mu$ - and  $\kappa$ -opioid receptor expressed with the Semliki Forest virus system. Pharm Acta Helv 73, 53-56. 1998

Sommer, H., Harrer, G. Placebo-controlled double-blind study examining the effectiveness of an *Hypericum* preparation in 105 mildly depressed patients. J Geriatr Psychiatr Neurol 7, 9-11. 1994

Sosa, S., Pace, R., Bornancin, A., Morazzoni, P., Riva, A., Tubaro, A., Della Loggia, R. Topical anti-inflammatory activity of extracts and compounds from *Hypericum perforatum* L. J Pharm Pharmacol. 59, 703-709. 2007

Spiess, PE., Grossmann, HB. Fluorescence cystoscopy: is it ready for use in routine clinical practice? Curr Opin Urol. 16, 372-376. 2006

Stevinson, C., Ernst, E. A pilot study of *Hypericum perforatum* for the treatment of premenstrual syndrome. BJOG. 107, 870-876. 2000

Stevinson, C., Ernst, E. Can St. John's wort trigger psychoses? Int J Clin Pharmacol Ther. 42, 473-480. 2004

Swiss Pharmacopoeia (Pharm. Helv. 8). Eidgenössisches Department des Inneren, Bern, 1999

Szegedi, A., Kohnen, R., Dienel, A., Kieser, M. Acute treatment of moderate to severe depression with *Hypericum* extract WS 5570 (St John's wort): randomised controlled double blind non-inferiority trial versus paroxetine. BMJ. 330, 503-506. 2005

Teufel-Mayer, R., Gleitz, J. Effects of long-term administration of *Hypericum* extracts on the affinity and density of the central serotonergic 5-HT1A and 5-HT2A receptors. Pharmacopsychiatry. 30, Suppl 2, 113-113. 1997

Thiede, HM., Walper, A. Inhibition of MAO and COMT by *Hypericum* extracts and hypericin. J Geriatr Psychiatry Neurol. 7, Suppl 1, 54-56. 1994

Traynor, NJ., Beattie, PE., Ibbotson, SH., Moseley, H., Ferguson, J., Woods, JA. Photogenotoxicity of hypericin in HaCaT keratinocytes: implications(Auswirkung) for St. John's Wort supplements and high dose UVA-1 therapy. Toxicol Lett. 158, 220-224. 2005

Trofimiuk, E., Walesiuk, A., Braszko, JJ. St john's wort (*Hypericum perforatum*) counteracts deleterious effects of the chronic restraint stress on recall in rats. Acta Neurobiol Exp. 66, 129-138. 2006

Trofimiuk, E., Walesiuk, A., Braszko, JJ. St John's wort (*Hypericum perforatum*) diminishes cognitive impairment caused by the chronic restraint stress in rats. Pharmacol Res. 51, 239-246. 2005

Uebelhack, R., Gruenwald, J., Graubaum, HJ., Busch, R. Efficacy and tolerability of *Hypericum* extract STW 3-VI in patients with moderate depression: a double-blind, randomized, placebo-controlled clinical trial. Adv Ther. 21, 265-275. 2004

Upton, R. St. John's Wort, Monograph of the American Herbal Pharmacopoeia, 1997

Usai. M., Leggio. B., Grappi. S., Nanni. G., Gambarana. C., Tolu. P., Giachetti. D., De Mortis. MG. *Hypericum perforatum* subspecies *angustifolium* shows a protective activity on the consequences of unavoidable stress exposure at lower doses than *Hypericum perforatum* *perforatum*. Pharmacopsychiatry. 36, 283-287. 2003

Uzbay, T.I. *Hypericum perforatum* and substance dependence: A review. Phytother Res 22, 578-582. 2008

Van Gurp, G., Meterissian, GB., Haiek, LN., McCusker, J., Bellavance, F. St John's wort or sertraline? Randomized controlled trial in primary care. Can Fam Physician. 48, 905-912. 2002

Volz, HP., Murck, H., Kasper, S., Moller, HJ. St John's wort extract (LI 160) in somatoform disorders: results of a placebo-controlled trial. Psychopharmacology. 164, 294-300. 2002

Vorbach. EU., Arnoldt. KH., Hubner. WD. Efficacy and tolerability of St. John's wort extract LI 160 versus imipramine in patients with severe depressive episodes according to ICD-10. Pharmacopsychiatry. 30, Suppl 2, 81-85. 1997

Volz. HP., Laux. P. Potential treatment for subthreshold and mild depression: a comparison of St. John's wort extracts and fluoxetine. Compr Psychiatry. 4, Suppl 1, 133-137. 2000

Wagner, H., Bauer, R. Arzneidrogen und ihre Inhaltsstoffe. Band 2. Wissenschaftliche Verlagsgesellschaft mbH, Stuttgart, 1999

Wahlman, J., Hirst, M., Roberts, JE., Prickett, CD., Trevithick, JR. Focal length variability and protein leakage as tools for measuring photooxidative damage to the lens. Photochem Photobiol. 78, 88-92. 2003

Weber, W., Van der Stoep, A., McCarty, R.L., Weiss, N.S., Biederman, J., McClellan, J. *Hypericum perforatum* (St John's wort) for attention-deficit/hyperactivity disorder in children and adolescents. JAMA 299, 2633-2641. 2008

Wenk, M., Todesco, L., Krahenbuhl, S. Effect of St John's wort on the activities of CYP1A2, CYP3A4, CYP2D6, N-acetyltransferase 2, and xanthine oxidase in healthy males and females. Br J Clin Pharmacol. 57, 495-499. 2004

Werneke, U., Horn, O., Taylor, DM. How effective is St John's wort? The evidence revisited. *J Clin Psychiatry.* 65, 611-617. 2004

Wheatley, D. LI 160, an extract of St. John's wort, versus amitriptyline in mildly to moderately depressed outpatients--a controlled 6-week clinical trial. *Pharmacopsychiatry.* 30, Suppl 2, 77-80. 1997

Whitten, DL., Myers, SP., Hawrelak, JA., Wohlmuth, H. The effect of St John's wort extracts on CYP3A: a systematic review of prospective clinical trials. *Br J Clin Pharmacol.* 62, 512-526. 2006

WHO monographs. WHO-Monographs on selected medical plants. World Health Organization, Geneva, 2002

Wichtl, M. Teedrogen. Wissenschaftliche Verlagsgesellschaft mbH, Stuttgart, 1984

Wichtl, M. Teedrogen. Wissenschaftliche Verlagsgesellschaft mbH, Stuttgart, 4. Auflage 2002

Wichtl, M. Herbal Drugs and Phytopharmaceuticals. Medpharm scientific publishers, Stuttgart 2004

Widy-Tyszkiewicz, E., Piechal, A., Joniec, I., Blecharz-Klin, K. Long term administration of *Hypericum perforatum* improves spatial learning and memory in the water maze. *Biol Pharm Bull.* 25, 1289-1294. 2002

Wielgus, AR., Chignell, CF., Miller, DS., Van Houten, B., Meyer, J., Hu, DN., Roberts, JE. Phototoxicity in Human Retinal Epithelial Cells Promoted by Hypericin, a Component of St. John's Wort. *Photochem Photobiol.* 83, 706-713 2006

Wilhelm, KP., Biel, S., Siegers, CP. Role of flavonoids in controlling the phototoxicity of *Hypericum perforatum* extracts. *Phytomedicine.* 8, 306-309. 2001

Woelk, H. Comparison of St John's wort and imipramine for treating depression: randomised controlled trial. *BMJ.* 321, 536-539. 2000

Wright, CW., Gott, M., Grayson, B., Hanna, M., Smith, AG., Sunter, A., Neill, JC. Correlation of hyperforin content of *Hypericum perforatum* (St John's Wort) extracts with their effects on alcohol drinking in C57BL/6J mice: a preliminary study. *J Psychopharmacol.* 17, 403-408. 2003

Wurglics, M., Schubert-Zsilavecz, M. *Hypericum perforatum*: a 'modern' herbal antidepressant: pharmacokinetics of active ingredients. *Clin Pharmacokinet.* 45, 449-468. 2006

Zhou, S., Chan, E., Pan, SQ., Huang, M., Lee, EJ. Pharmacokinetic interactions of drugs with St John's wort. *J Psychopharmacol.* 18, 262-276. 2004

Zörnig, H. Arzneidrogen. Teil II. Verlag Klinkhardt, Leipzig, 1911

Zou, Y., Lu, Y., Wei, D. Antioxidant activity of a flavonoid-rich extract of *Hypericum perforatum* L. *in vitro.* *J Agric Food Chem.* 52, 5032-5039. 2004

Zou, Y., Lu, Y., Wei, D. Hypocholesterolemic effects of a flavonoid-rich extract of *Hypericum perforatum* L. in rats fed a cholesterol-rich diet. *J Agric Food Chem.* 53, 2462-2466. 2005