



Name :Eucommia Ulmoides Extract
Chlorogenic acid
Source: Eucommia Ulmoides (Cortex
Eucommiae)
Botanical Name : Eucommia ulmoides
oliv
Extract part: Leaf
Purity: 98%
Composition:Chlorogenic acid
Appearance: Fine white powder
Country of origin:P.R. China

Source

Eucommia ulmoides is a small tree that native to China ,also konwn as Du Zhong, Rubber Bark tree, Tochu, that has been highly valued in herbology such as traditional Chinese medicine since past and now Tea made from Eucommia ulmoides leaves is widely consumed as a health food due to its various pharmacological effects . It contains a collection of flavonoids ,Chlorogenic acid ,lignans and irioid compounds .

Researches shows Eucommia ulmoides possess activities in reducing preventing bone loss, inducing fat loss, preventing oxidative gastric injury,and reducing elevated blood pressure and triglycerides. The anti-obese effects of the plant have been confirmed to increase heat production in animal models and surprisingly potent among nutritional supplements.

Main Bio-actives

Eucommia ulmoides, rich in polyphenolic compounds such as lignans, phenolic acid, chlorogenic acid and flavonoids,the total flavonoid content is 9.5-21.3mg/g of the leaves .The bark and leaves of Eucommia ulmoides tend to possess both lignans and irioid glycosides as the active components, which are likely what set this plant out from others.

Pharmacological Function

Blood Pressure

Eucommia ulmoides has been played a role in herbology such as traditional Chinese medicine commonly for its antihypertensive effects. Studies shows Eucommia ulmoides bark can also cause vasorelaxation in a concentration dependent manner in a way that is fully dependent on Nitric Oxide and thought to be related to potassium channels.In a research report published on Vascular Pharmacology in 2003 their investigation with isometric contraction using isolated rat aortic and dog carotid rings.The research have provided the first evidence on the in vitro concentration

independently caused endothelium-dependent relaxation of both aqueous extracts isolated from eucommia leaf (L) and bark (B). It suggests that the endothelium-dependent, NO-mediated relaxation evoked by the aqueous eucommia extracts was not mediated via the activation of endothelium muscarinic receptors and may involve the activation of K⁺-channels.

The result forms the pharmacological basis for its well-documented antihypertensive action and lead further studies such as one published on Alternative Medicine Review(2011). The report said eucommia ulmoides appears to possess beta-blocking potential as assessed by a lipolysis assay with isoproterenol.

Anti-obesity

Longterm studies proved Eucommia ulmoides leaves as a potent anti-obese agent. A study was conducted to elucidate the mechanisms underlying the plasma triglyceride-lowering effect of E. ulmoides leaves on Journal of the Science of Food and Agriculture. This study indicates that the promotion of fatty acid oxidation, probably by the action of phytochemicals, participates in the ameliorative effect of E. ulmoides leaves on hypertriglyceridaemia. DNA microarray analysis revealed that genes involved in hepatic α -, β - and ω -oxidation, mainly related to the peroxisome proliferator-activated receptor α and δ signalling pathway, were up-regulated in the treated group. High-performance liquid chromatography analysis showed that E. ulmoides leaves contain three phytochemicals that make up 60 mg g⁻¹ of the material and are likely to be the active components. These findings provide the scientific evidence for the functionality of E. ulmoides.

Osteoporosis

Bone published report of a in lab study in 2009 shows the preventive effect of Eucommia ulmoides extract on estrogen deficiency-induced osteoporosis. Eighty 3-month-old female Sprague-Dawley rats were used and randomized. Daily oral administration of E. ulmoides extract at higher doses (300 or 500 mg/kg/day) was found to be able to significantly prevent OVX-induced decrease in biomechanical quality of femur such as maximum stress and Young's modulus. The mechanical changes were associated with the prevention of a further bone mineral density (BMD) decrease or even with some improvements in microarchitecture.

The scientists conclude that 16 weeks of E. ulmoides treatment improves bone biomechanical quality through modifications of BMD, and trabecular microarchitecture without hyperplastic effect on uterus, and it might be a potential alternative medicine for treatment of postmenopausal osteoporosis.

Antioxidant and antimutagenic effects

Life Sci. published a report in 2003 suggested Eucommia ulmoides leaf water extract to play an important role in the prevention of gastric cancer associated with Helicobacter pylori (HP) infection as it have been reported to have potent antioxidant and antimutagenic effects. The administration of either WETL or VC to the ammoniated water and VC-deficient diets ameliorated the increases in intramucosal TBARS levels and labeling indices of BrdU, 8-OHdG, ssDNA and TUNEL, i.e., the levels were similar to those measured in the normal-fed control animals. These data suggest that insufficient VC ingestion may be an important risk factor for gastric cancer development in patients with HP infections. Furthermore, our results suggest that WETL or some constituent may contribute to the prevention of oxidative gastric injury that precedes carcinogenesis.

Application

Eucommia ulmoides is a kidney-tonifying herbal medicine with a long history of safe use in China to been used for treatment of bone fractures, joint diseases , back pain, increase stamina and fatigue, and make muscles stronger while promoting longevity and fertility.

Modern researches proven Eucommia ulmoides leaf extract have anti-obesity ,preventive effect on gastric cancer and deficiency-induced osteoporosis, moreover, beta-blocking potential and may be vasorelaxant .

