

Pueraria mirifica Research Review
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Pueraria mirifica is a plant which belongs to the family Papilionaceae (Leguminosae). The root is the part of the plant that has been used in Thailand for more than 700 years. It has also been called Kwao Krua and Thai Kudzu. This plant grows in forest regions in northern Thailand. Legend has touted the anti-aging properties of using this plant medicine for centuries. A palm leaf translated from Lana in 1931, discusses the use of the root, Pueraria Tuberous Root, to “make the skin smooth like a six year old child and allow you to live 1,000 years and prevent suffering from parasites, while also enhancing memory.” (1)

Folklore goes on to say that the root is a “fountain of youth” for aged men and women. It helps to smooth wrinkled skin, supports healthy hair growth, improves eye health, sharpens the memory, increases energy and vigor, improves appetite and supports restful sleep. Its no wonder that the Latin name of the plant, “MIRIFICA” means miracle!

To insure the most comprehensive profile of active constituents, it’s important to gather the plants that have been grown in the most favorable conditions. The location, age of plant (2-4 years), atmospheric conditions (no rain), drying process and storage conditions must be carefully monitored.

Pueraria Mirifica belongs to the same family as soy, and contains similar estrogen-like compounds, including genistein and daidzein. Modern scientific studies have further elucidated chemical components found in Pueraria, including phytoestrogens which are more potent than those found in soy, such as Miroestrol and Deoxymiroestrol. These natural agents function like estrogen in the body. Thus Pueraria plays a valuable role in helping to maintain a healthy hormone balance in menopausal women, when estrogen levels drop, and women experience changes in mood, hot flashes, lower libido, sleep interruption and other health issues. Pueraria has earned a reputation for its supportive effects for breast health, and has been featured in products that help support breast firmness, as well as protecting breast tissue. In addition to their hormone supporting effects, these substances have a high level of antioxidant activity, probably due to their ability to increase the cell protective substance called superoxide dismutase (SOD). (2)

In Thailand, the Ministry of Public Health is Similar to the National Institute of Health (NIH), in the United States. The Thailand Ministry of Public Health officially endorses Pueraria, due to the long history of safe use, along with modern scientific data that supports its safety and efficacy. Safety studies show that the normal therapeutic dose, provides a wide margin of safety. (3) The Brazilian Journal of Medical and Biological Research published a study in September 2009, entitled “ The mutagenic and antimutagenic effects of the traditional phytoestrogen-rich herbs, Pueraria mirifica and Pueraria lobata.” Their conclusion was, “The tests confirmed the non-mutagenic but reasonably antimutagenic activities of the two plant extracts, supporting their current use as safe dietary supplements and cosmetics.”

Bio-Botanica's has patented a specific and highly active *Pueraria mirifica* compound called Puresterol®. United States Patent # 7,658,955 granted to Bio-Botanica®, describes a specific exclusive extraction process that yields high levels of active constituents that can be used for both internal and external applications. The active constituents are being tested in numerous studies that are yielding exciting results and supporting its use for menopausal symptoms. The patent also specifically describes the use of this extract as a topical composition that when applied to the skin reduces wrinkles without eye irritation.

This exact compound was used in a recent research study, which showed that the phytoestrogens in Puresterol® were able to inhibit the growth of breast cancer cells, in-vitro. The study entitled, *The Effects of Pueraria mirifica on Estrogen-receptor expression by MCF-7 breast cancer cell*, was published in The Proceedings of The Nutrition Society, conducted at Edinburgh's Napier University by Dr Margaret Ritchie and Dr Janis MacCallum. (4) This research helps to validate the breast health supportive use of this herb, as well as its safety.

Another study entitled, *Effects and safety of Pueraria mirifica on lipid profiles and biochemical markers of bone turnover rates in healthy postmenopausal women*, (5), found that "By the determination of the serum surrogate of bone turnover, it may be assumed that *Pueraria mirifica* has antiresorptive activity." This may prove to be a useful natural herbal therapy for woman who would like to support bone health during menopause.

A study entitled, *Efficacy and safety of Pueraria mirifica (Kwao Kruea Khao) for the treatment of vasomotor symptoms in perimenopausal women: Phase II Study*, concluded "Pueraria mirifica, containing phytoestrogens, relatively alleviated the climacteric symptoms in perimenopausal women. The transient negative profiles occurred in a small number of subjects that included anemia, and liver profiles. While there was a slight decrease in lipoproteins and an increase in hormonal profiles, *Pueraria mirifica* demonstrates great promise in the treatment of climacteric symptoms among perimenopausal women." (6)

A study entitled, *Efficacy comparison of Pueraria mirifica (PM) against conjugated equine estrogen (CEE) with/without medroxyprogesterone acetate (MPA) in the treatment of climacteric symptoms in perimenopausal women: phase III study*, evaluated the efficacy comparison of *Pueraria mirifica*, (Kwao Kruea Khao), against conjugated equine estrogen (CEE) with/without medroxyprogesterone acetate (MPA) in the treatment of perimenopausal women with climacteric symptoms. The conclusion determined that "Pueraria mirifica containing phytoestrogens, has estrogenic effect as similar as CEE, and can alleviate the climacteric symptoms in perimenopausal women. PM demonstrates great promise in the treatment of climacteric symptoms." (7)

Cautions: *Pueraria mirifica* should not be used by children, women younger than 20 years old, anyone who is currently taking birth control pills or hormone replacement therapy,

women with cysts of the breast, ovary or uterus, anyone who has had estrogen related cancers, pregnant women or nursing mothers.

Pueraria mirifica is an ancient herb with a long history of safe and effective use that is now entering the modern market with scientific inquiry supporting traditional use.

References:

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