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# Phytochemical and Pharmacological activities of Genus *Puereria*

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**Abstract**
Genus *Puereria* belongs to family Leguminosae. They are distributed from West Himalaya to Sikkim, upto 4000ft in Kumaon, lower hills of Punjab, Mount Abu in Rajasthan and southern part of India. Plants belonging to genus *Pueraria* are reported to exhibit medicinal properties. It is reported to use in Indian tradition medicinal system, Chinese traditional medicinal system, in Japan as traditional medicine as medicinal plant.

**Keywords:** Leguminosae, *Pueraria*, medicinal properties, Indian medicinal system

## Introduction
Various species of this Genus are used as medicinal plant. Species like *Puereria lobata* is reported to exhibit medicinal properties aldose reductase inhibitor, antimutagenic, antidipsotropic, antioxidant activities and used to suppress alcohol preference [1-8].

From root of this species constituents Allantoin, β-sitosterol, β -sitosterol-ββ-D-glucoside, daidzin, 6,7-methoxycoumarin, 5-methylhydrantoin kudzysaponins have been usolated. Root part is also used in skin lightening cosmetic [9-13]. From rhizome of this species active constituent saizin and puerarian have been isolated and have shown antithrombotic and antiallergic activities [14]. Species *Puereria ometensis* is reported as potent for myocardiascischemia [15].

*Puereria tuberosa* sps is reported for contraceptive potency, contraceptive efficacy in female. From this species active constituent purarone, pureavostan, petrocarpenoid anhydrotuberosin, tubertostan, amino acids and oligopetide have been isolated [16-20]. Flowers of this species is used to cure oeprosy, biliousness, disease of blood (vata), burning sensation, urinary discharges & indigestion and root part os used as a demulcent, referigant in fever & to reduce swelling of joints [21]. Pureria tuberosa has also been reported to be a potent antifertility agent [22-24].

Medicinal activities of flower and rhizome of *Puereria thunbergiana* has been reported to exhibit cytotoxic, antihelicobector pylori, antimutagenic, antilipid peroxidative, hyperglycemic, hypolipidemic, therapeutic agent for leukemia [25-27].

*Puereria* species are also reported o show cardiovascular, antioxidant activities. Some authors have reported use of *Puereria* for cure of gastrointestinal disorder [31]. A study reports that *Puereria* species are used for the treatment of sexually transmitted disease in Zimbabwe [32].

Tectoridin, an isoflavone glycoside from the flower of *Pueraria lobata*, is reported to prevent acute ethanol-induced liver [33]. Miroestrol, a phytoestrogen active principal isolated from *Pueraria mirifica is reported to* improve the antioxidation state in the livers of rats [34].

Authors have evaluated anticonvulsant activity of alcoholic extract of tubers of *Pueraria tuberosa* (Roxb) [35]. *Pueraria tuberosa* DC extract improves androgenesis and sexual behavior via FSH LH cascade [36]. Hypoglycemic effect of *Pueraria tuberosa* in healthy and alloxan diabetic Rats and Nootropic activity of tuber extract of *Pueraria tuberosa* have been reported [37, 38]. Authors have reported *Pureria tuberosa* a Immunomodulatory and antioxidative potential of herb and Hypolipidemic effects of tubers of *Pueraria tuberosa* [39, 40].

Screening of crude extracts of *Pueraria tuberosa* has shown Anti-diabetic activity and phytochemical activities [41]. Anti-inflammatory effect of *Pueraria tuberosa* extracts through improvement in activity of red blood cell anti-oxidant enzymes [42]. Effect of *Pueraria tuberosa* DC. (Indian Kudzu) has been reported on blood pressure, fibrinolysis and oxidative stress in patients with stage 1 hypertension [43].

Wound healing and anti-inflammatory activity of *Pueraria tuberosa* has also been reported [44]. Active component Spinasterol isolated from roots of *Pueraria* has shown antitumor

Activity [45]. Isoflavonoids extracted from *Pueraria has been reported to exhibit a*ntipyretic, analgesic and muscle relaxant activities [46]. *Pueraria mirfica* and *Pueraria lobata* have been reported to show mutagenic and antimutagenic effects [47].
*Pueraria montana* is reported to useful in the treatment of angina pectoris and migraine [48]. The flowers and the roots are antidote, antiemetic, antipyretic, antispasmodic, demulcent, diaphoretic, digestive, febrifuge, hypoglycaemic and hypotensive. A decoction of the flowers and tubers is used to treat alcoholism, fever, colds, diarrhoea, dysentery, acute intestinal obstruction etc [49-51].

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