



## **Nephroprotective Siddha herb *Orthosiphon stamineus* Benth(Poonaimesai)**

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### **Abstract**

Poonai meesai(*Orthosiphon stamineus* Benth) is one of the known herb among Siddha physicians, widely used in renal disorders. Reviewing of scientific claims related with the pharmacological actions is essential one. Thus this herb posses nephroprotective, anti inflammatory, anti oxidant and anti hypertensive activities which are collectively essential to treat renal disorders.

### **Introduction:**

Siddha One of the Ancient systems of medicine, developed by Siddhars. Original traditional texts are written in Tamil language. The pharmacology comprises of Herbs, Minerals, Metals, Animal and Sea products. They are used as medicines for Acute and Chronic ailments. Siddha basically dealt with Vaatham-Vaidhyam-Yogam-Gnanam. At present scenario, Poonai meesai(*Orthosiphon stamineus* Benth) is one of the known herb among Siddha physicians, widely used in renal disorders. Reviewing of scientific claims related with the pharmacological actions is essential one.

### **Botanical Information Description of the Plant:**

***Orthosiphon stamineus* Benth**

**Family:** Lamiaceae (Labiatae)

**Genus:** *Orthosiphon*

**Ethnobotanical survey**

***Orthosiphon stamineus*. Syn. *Orthosiphon aristatus*, *orthosiphon spicatus***

Java tea, cat's whiskers

**Vernacular names**

**English:** cat's whiskers

**French:** the de java

**Tamil:** poonai meesai.

**Tongan:** kava i pusi

**Botanical Characters:**

Slender perennial herb to 2 m high, the branchlets 4 – angled, sparsely pubescent to glabrescent, sometimes purplish. Leaves petiolate, the petioles 1-2(4.5) cm long, pubescent, the blades lanceolate to ovate or rhombic, 2-9 X 1-5 cm, chartaceous to membranous, cuneate at base, acute to acuminate at apex, coarsely serrate at margin, glabrous to pubescent on both surfaces, racemes 10-15 cm long, the verticals lax, distant, the bracts sessile, ovate, 1-2 mm long ciliolate, the pedicels 4 mm long; calyx curved-campanulate, the tube 3 mm long at anthesis, concave, scabridulous on nerves, the upper lip ovate to 3 X 2.5 mm, the lower lip longer, the median lobes acuminate-aristate: the tube 10-15 mm long straight, strigose-tomentose without, the upper lip shallowly 4-lobed, recurved, the lower lip as long as upperlip, concave, stamens glabrous, coiled in bud, the anther purple; style 5-6 cm long, glabrous clavate and briefly 2-lobes at apex, white distally; nutlets ovoid – oblong to 2 mm long, glabrous, rugose .

**Scientific Claims:**

**1. Diuretic activity:**

Doan *et al.* (1992) herbal remedies are widely used alongside modern drugs. They assessed the diuretic effect of four tradition Vietnamese herbal remedies, all claimed to produce an increase of diuresis.<sup>1</sup>

**2. Antihypertensive activity:**

Ohashik *et al.* (2000) demonstrated the antihypertensive activities of *Orthosiphon stamineus* and showed an inhibitory effect on the contractile responses on rat thoracic aorta smooth muscle stimulated with KCl before hand<sup>2</sup>

**3. Hypoglycaemic activity:**

Mariam and Asmawi, (1996) studied the hypoglycaemic activity of the aqueous extract of *Orthosiphon stamineus*.

#### **4. Nephroprotective Activity:**

N.Kannappan et.al revealed that the increased levels of serum creatinine, blood urea, urinary protein and extent of renal damage were decreased by the methanolic extract of *Orthosiphon stamineus* at both dose levels that is 100 and 200 mg/kg body weight in rats<sup>4</sup>.

#### **5. Anti oxidant activity:**

Golamreza karimi and Mohammed ramezani reported as the Cisplatin Nephrotoxicity and protection by milk thistle extracts in rats<sup>5</sup>. Lee et al. reported as the Screening of medicinal plant extracts for antioxidant activity<sup>6</sup>. Lyckander and Malterud also reported as the lipophilic flavanoids from *Orthosiphon stamineus* prevent oxidative inactivation of 15-lipoxygenase<sup>7</sup>. Masuda reported as the Orthosiphon A & B novel diterpenoid inhibitors of TPA induced inflammation from *Orthosiphon stamineus*<sup>8</sup>. Farruch and Iqbal ahamadzafer mehmood reported the aqueous extract of *Orthosiphon stamineus* showed antioxidant and free radical scavenging properties<sup>9</sup>.

#### **Discussion and Conclusion:**

Various claims showed that Siddha herb Poonai meesai is containing more number of pharmacological claims. Thus this herb posses nephroprotective, anti inflammatory, anti oxidant and anti hypertensive activities which are collectively essential to treat renal disorders. In-depth knowledge on this herb on various studies needed to provide for further evaluation in clinical practice.

#### **References:**

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