

Monograph: *Ochrocarpus longifolius*

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Sir,

Ochrocarpus longifolius Benth and Hook f. is commonly known as Nagappu, Nagesarpu (Siddha/Tamil) and Laal-Naagakeshar, Surangi (Folk). *Ochrocarpus longifolius* is also sometimes referred to as Nagakesara^[1] and belongs to family *Clusiaceae* and is found in the evergreen Western Ghats southwards from Konkan to Malabar and Coimbatore.^[2]

Ochrocarpus longifolius is a big tree with very pretty and glossy foliage. Tiny flowers are borne in clusters on the tree trunk and mature branches. Flowers have a very pleasant scent, which lasts even when the flowers dry up. The flowers appear in the hot weather and the fruits ripen during the rainy season. The flower buds of *Ochrocarpus longifolius* have been reported to contain 0.50–1.5% volatile oil and 5–6% oleoresins. Thirty-five chemical constituents of the oil have already been identified by gas chromatography (GC) and GC-mass spectrometry. Sesquiterpenes are the predominant constituents of the oil, while major compounds are b-caryophyllene (28.25%), d-cadinene (14.22%), a-copaene (5.24%), linalool (3.46%), a-humulene (4.63%), and a-murolene (3.35%). Leaves gave amentoflavone, quercetin and vitexin as major constituents.^[3]

Fresh flowers of the tree are used for worship in temples and for personal adornment such as “*Gajara*”. Dried flowers retain their fragrance for a long time, and could be extracted for perfume. Flower buds contain a coloring matter which dyes silk red. The dried flower buds are light brown in colour and round in shape. Foreign matter (0.29%), loss on drying (13.16%), total ash (6.30%), acid-insoluble ash (0.43%), water-soluble ash (1.97%), alcohol-soluble extractive (16.03%), water-soluble extractive (12.57%), volatile oil (0.10%), foaming index 200 and swelling index 0.36 ml of the crude drug (flower buds) have been obtained. Phytochemical screening of the methanolic extract of the

crude drug (flower buds) identified presence of glycosides, reducing sugars, phenolics, tannins, coumarins, sterols, flavanoids, saponins and volatile oil. Total phenolics (138.30 ± 4.58), total tannins (133.0 ± 1.52), total flavonoids (41 ± 1.28) and total flavonol (0.56 ± 0.04) content in mg/g of plant extract have been estimated.^[4]

Ochrocarpus longifolius exhibits antibacterial activity against both Gram-positive and Gram-negative organisms. Vitexin (8-β-D-glucopyranosyl-apigenin) (VT), isolated from *Ochrocarpus longifolius* is known to have potent hypotensive, anti-inflammatory and anti-spasmodic (nonspecific) properties,^[5] while vitexin and meso-inositol exhibited positive effect on treatment of leprosy.^[6] The hypotensive effect of VT was attributed to its ganglion-blocking properties, and anti-inflammatory effects to its anti-histaminic, anti-bradykinin and anti-serotonin properties. Surangin B, a coumarin isolated from *Ochrocarpus longifolius* was shown to have antifungal and anthelmintic activity.^[7] The buds possess mild stimulant, carminative and astringent properties and are used in dyspepsia and hemorrhoids. They are also used for gastritis, leucoderma, headache and snake and scorpion-bite.

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