Institution Innovation Council, Central University of Jammu

The Institution Innovation Council, Central University of Jammu in continuation of mapping Medicinal and aromatic plant diversity of Central University of Jammu under the President ship of Dr. Pankaj Mehta came across Melia azedarach (Bakayan) which is distributed in abundance in and around the University campus. The detailed classification and case study carried out on ***Melia azedarach (Bakayan)*** in controlling chronic renal disorder is described in the present note. ***The IIC will be leading in developing the syrup from the mentioned plant Melia azedarach (Bakayan) for curing chronic kidney disorder the benefit of which can be reaped by the employees, students and scholars of Central University of Jammu. The***

The Details are given as under:

Melia azedarach (Bakayan)

Kingdom: Plantae

Phylum: Magnoliophyta

Class: Magnoliopsida

Order: Sapindales

Family: Meliaceae

Genus: *Melia*

species: *azedarach*

Image Source: Dr. Pankaj Mehta (President IIC, CUJ)

Common name: Bakayan tree, Bead tree, Indian lilac, Ghora neem, china berry, Mahanimba and **Dhraink**.

Morphology: *Melia azedarach* is a medium sized deciduous tree with round crown. Its leaves are compound and long. Leaflets are dark green on dorsal side and lighter green on ventral side,

with serrated margins. The leaves are alternate or opposite, pinnate or unifoliolate or ternate or bifoliolate or bipinnate compound or simple and 12-24 mm in long. The flowers are small, bluish coloured and fragrant. During its flowering stage in April and May its fragrance spreads all over the forest. The fruit is a drupe, marble-sized, greenish light yellow in colour and gradually become wrinkled and pale yellow after ripenning stage. Its fruit is locally called as **Drakula**.

IUCN Conservation Status: *Melia azedarach* is not a threatened species as it is widely spread throughout the world. This species is also known as poor man's tree as **Bakayan tree** helps the farmer to meet his day to day requirements and hence, this tree is planted by the villagers near their houses and along the borders of their farmlands.

Medicinal Value:

The parts of the **Bakayan tree** used for medicinal purpose are roots, stem bark, leaves, bark, seed, gum or sap. **Serrated leaves of Bakayan tree contain quercetin, rutin, salanin, tetranortriterpenoids.** Quercetin has anti-inflammatory and antioxidant qualities that help to reduce inflammation in the body. Rutin is a flavonoid which also has antimicrobial and antifungal properties beside being anti-inflammatory and antioxidant. The bark contains several oils and alkaloids which are also beneficial for curing various ailments.

Traditionally, *Melia azedarach* and its different parts are used for curing **Ascariasis, diarrhea, tooth pain and gum infection, arthritis, menstrual problems and dandruff. The juice extracted from the leaf is used as a diuretic and to dissolve kidney stones.** An aqueous extract prepared from the leaves of **Bakayan tree** reduces the intensity of asthmatic attacks. The flowers and leaves are applied as a poultice in the treatment of neuralgia and nervous headache. The leaves are used externally to treat skin conditions such as scabies and itch. The leaves are used as mosquito repellants and other insects. Leaves are also used as insecticide by the villagers in the stored food grains. Aqueous extracts of *Melia azedarach* possess significant inhibitory effect against pathogens.

A number of research investigations have been carried on Melia azedarach which describes its pliant effectiveness for curing various ailments. **One such case study [1] was conducted by Chhavi Gupta and Chhaya Gupta from National Institute of Ayurveda, Jaipur, India.** In this study, a case of a 41 years old female patient suffered from **Chronic kidney disease** was reported. The patient was given some Ayurvedic preparations such as **Bakayan Swaras** as the drug possesses nephroprotective activity. This case study concluded that ***Melia azedarach*** **proves to be an adjuvant therapy in patients of chronic renal failure** along with other treatment modalities.

[1] Chhavi Gupta, Chhaya Gupta. Ayurvedic Management of Chronic Kidney Disease-A Case Study. AYUSHDHARA, 2016;4(3):1198-1200.