

MONOGRAPH OF ASPARAGUS RACEMOSUS AND MUCUNAPRURIENS

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Abstract: Herbal medicine also known as phytomedicine, natural or botanical medicine is the basic treatment option in traditional therapeutic systems. According to World Health Organization (WHO), 80% of people use conventional or traditional methods of treatment around the world. Many of them prefer drugs of natural origin as well as medicines made from plant extracts. *Asparagus Racemosus* is one of the significant traditional medicinal plants which show effectiveness to cure various disorders related to the central nervous system also indigestion, and hepatopathy, and improving the mental capacity & life span of an individual. Usually, the growth of *Asparagus Racemosus* is observed in subtropical and tropical areas. *M. pruriens* is another plant containing several medicinally important components which are effective against CNS-related illnesses like shaking palsy and tremors due to their specific action. Mostly the cultivation of this plant is observed in tropical and sub-tropical areas of India. This plant comprises several components with lots of medicinal activities like anti-pyretic, analgesic, anti-microbial, anti-cancer, and anti-inflammatory. These species show different phytochemical components, like vitamins and minerals.

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INTRODUCTION

Asparagus racemosus (Shatavari) is a medicinal plant having a place in the group of Liliaceae family. This species is found in subtropical and tropical zones, for example, India, Asia, Australia, and Africa. The phytochemical compounds of the plant change according to the topographical distribution and accessibility. During hot climatic conditions, the plant shows the closeness of rhizomes, airborne parts, and tuberous roots. At the point when the plant goes to the torpid stage, the airborne part gets bent. *Asparagus. racemosus* is as often possible used in ayurvedic tranquilize preparations as it is referred to treat conditions, for example, growing, to help insusceptibility, and improve life span and mental capacity. The *Asparagus. racemosus* additionally discovers its application in restoring neurological disorders hepatopathy, tumors, and dyspepsia (1).

GEOGRAPHICAL DISTRIBUTION AND HABITAT

Asparagus racemosus is the most common.

found in sub-tropical areas and in hot climates. It is a medicinal evergreen plant that has a height of 100 to 150 cm. The hidden parts of *Asparagus* are covered with water tuberous up to 35-100 cm and about 2 cm in width. The roots of the plant are arranged in the formation of a cluster. These roots join at the base of the plant's stem. The stem of *A. racemosus* has a plump texture with several sensitive branches. The leaves of the plant are arranged in a bunch with needle-like shapes, 6-10 mm in length and 1 mm in width. The plant produces yellowish to greenish-white blooms which are circularly arranged. Small, red-colored berries are produced by the plant which is estimated to be 6-10 mm in diameter and is harmful to humans (2).

TAXONOMICAL CLASSIFICATION

Asparagus racemosus is from the kingdom of Plantae and its Division is Angiosperms. The Class of *Asparagus racemosus* is Monocotyledons and its Order is Asparagales of Family Asparagaceae also called Liliaceae. The Genus of this plant is *Asparagus* and Species is *racemosus* (3).

SIGNIFICANT PHYTOCONSTITUENTS OF *Asparagus. Racemosus*

Asparagus racemosus contains many important phytochemicals. Some of the major phytochemicals include isoflavones, steroidal saponins, asparagine, polysaccharides, racemosol, vitamins A, C, E, B1, B2, minerals Fe, Ca, P, Mg, and folic acid. Other compounds which are mostly found in plants include asparagine, tyrosine, arginine, tannic acid, essential oils, and flavonoids such as rutin, quercetin, and kaempferol (4).

Mucuna pruriens

Mucuna pruriens has a place with the Fabaceae plant family, generally famous as velvet bean, Cowitch, and Cowhage in English. It is a significant tropical vegetable found in shrubbery and supports in subtropical and tropical districts of India. It is an exceptionally important medicinal plant all pieces of the plant have significant healing properties. Utilization of leaves, roots, crude cases, and seeds is notable in various sicknesses for example diabetes, and joint inflammation, and shows exercises like pain-relieving and antipyretic (5). In Ayurved, it is supposed as a powerful sexual enhancer (6). The *Mucuna pruriens* plant has the capability to increase the intricate I movement of mitochondrial intricate I and basically enhance the function of norepinephrine and dopamine. That's why it was utilized in the management of nerve diseases like tremors and shakingpalsy (7).

GEOGRAPHICAL DISTRIBUTION AND NATURAL HABITAT

The previous infrageneric gathering of *Mucuna* (Papilionoideae, Leguminosae) has shown two subgenera; *M. subgenra Stizolobium* and *M. subggenra Mucuna*. Another taxon *M. subgenera Macrocarpa*

has been proposed based on its biogeography, fruit characteristics, and molecular phylogenetic examination. The only difference observed between *Macrocarpa* and types of the other two subgenera is based on the size of their ovaries which have a larger number of ovules and therefore longer cases with more number of seeds and a difference in the fruit length-to-width ratio (8).

TAXONOMICAL CLASSIFICATION

The *Mucuna* plant belongs to the Kingdom of Plantae and its Division is Magnoliophyta. The Class of this plant is Magnoliopsida and Order is Fabales. The Family of this plant is Fabaceae and the Subfamily Faboideae of Tribe Phaseoleae. The Genus of this plant is *Mucuna* and Species *pruriens* (9).

PHYTOCONSTITUENTS

The plant shows a wide display of phytoconstituents like alkaloids, flavonoids, tannins, and phenolic compounds which are subject to contrasted solid physiological and pharmacological activities (10). L-DOPA which is a harbinger of dopamine has been detected in the seeds of *M. pruriens* giving the plant potential for the treatment of Parkinson's disease (11).

CONCLUSION

Currently, there is a great capacity in consuming herbal medicine worldwide in the direct or indirect approach, thus numerous research articles showed the value of its traditional use. For centuries almost every known human civilization has been using herbal medicines as effective medications for the prevention and treatment of multiple health conditions like analgesic, antipyretic, anti-inflammatory, anti-cancer, anti-microbial, and enzyme inhibition activity. Medicinal plants are much cheaper as compared to allopathic medicine. Its use has increased day by day.

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Figure.1 A) whole Plant of *Asparagus racemosus*(B) Dry Roots of *Asparagus*



Figure.2 (A) *Mucuna Pruriens* Leaves, Fruits &Seeds (B)*Mucuna Pruries*Ripe fruits & seeds