

ALLIUM SPECIES : THE POTENT MEDICINAL HERBS- A COMPILATION

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The *Allium* species were among the earliest plants cultivated for spices. It was identified by primitive food-seekers by its distinctive smell, which is known to be associated with organosulfur compounds. The popularity of *Allium* species in folk medicine is through the centuries for treatment of such varied disorders as dog bites, insect stings, ear aches, burns and wounds, baldness, headaches, chest colds, respiratory ailments, asthma, pneumonia, diabetes, cardiovascular disorders, and rheumatism. *Allium* species can be attributed to their pungent aroma and strong taste.

Keywords : *Allium* species; Medicinal herbs.

Introduction

The history of early civilization reveals that a considerable number of drugs used in modern medicine figured in ancient manuscript such as the Rigved, the Bible, the Quran, and The Iliad. Indian literature suggests that Ayurvedic system of medicine has been in use for three thousand years. Charak and Susruta, two of the earliest Indian authors had sufficient knowledge of properties of Indian Medicinal plants. According to the W.H.O. as many as 80% of the world's inhabitants are dependent on plants for primary health care¹. Well known and widely appreciated genus *Allium*, comprises more than 600 different species, common members being leek, chive, shallot, onion, garlic and scallion. Common *Allium* species were valued by early civilizations both as important dietary constituents and as medicinals for the treatment of many disorders². The present paper is an attempt to compile the medicinal uses of some *Allium* species.

Observation and Record

Allium ascalonicum L. (Shallot) is cultivated in all countries of the east. It is used mainly in Unani medicine. Two varieties of Shallot have been mentioned in Unani texts – Shaami and Nafti. The flavour is similar to but milder than garlic and more delicate than onion³.

The flowers, leaves, roots, as well as bulbs of *Allium fistulosum* L. are edible and this plant is cultivated in nursery beds for this purpose. It has flavour like onion with very small bulbs. In Chinese traditional medicine, this onion is known as *Tsung Pai* or as *Allii Fistulosi*⁴.

Allium ursinum L. (Ramsons) can be used instead of cultivated garlic. It is currently much used in juice form for slimming diets³.

Allium ampeloprasum L. (Leeks) is expectorant and used to hasten suppuration of boils. The bases of the leaves are mild flavoured and edible and they are often blanched like asparagus. Leeks are also used in seasoning⁵.

Allium cepa L. (Onion) is a biennial crop. Storing food in the bulb during the first season and flowering in the second season, when the day become long and warm enough. The root system of onion is shallow and fibrous. Each leaf consist of two main parts, a sheathing leaf base and a hollow, linear, cylindrical or flattened blade, both being separated by a short membranous ligule⁶.

Allium sativum L. (garlic) is plant used in medicine from the time of Ayurveda, the ancient system of Indian medicine. It is also being used by rural people as tribal medicine for various ailments. The bulb and leaf are the source of medication used in the treatment of various diseases and disorder. From chemistry point of view the drug contains a group of biologically active constituents, known as allicin, allisatin I and allisatin II⁷.

Allium schoenoprasum L. is found in New York (U.S.A.). The young leaves and bulbs are used as condiment and also for seasoning. Extract of bulb used as cardiac depressor⁵.

Tribes of North-East India used seed of *Allium tuberosum* Rottl. Ex Spring in spermatorrhoea. Khasis and Jaintias eat the bulb as a vegetable⁸.

Allium govianum Wall (V. Faran,, Dhungar) is a perennial herb with aromatic leaves. The species frequently occur in the eastern hills of India and is also found in Garhwal between 3,200-3,800 metres elevation⁷.

The medicinal importance of all the species of *Allium* mentioned above are given in table 1 which is

Table 1.

S.No.	Plant name	Other name	Plant part	Uses	Recipe
1.	<i>Allium ascalonicum</i> L. Syn. <i>Allium sulvia</i> Ham.	English-Shallot Ayurvedic- Granjana, Grnja, Utt Sushruta-Ek-potia lehsun Unani- Gandanaa Persian-Gandhavaa, Karaas Arabic-Ek kanada-lasun. Hindi-Gandana Beng- Gundhun	Bulb Whole plant Leaf Seed	The bulbs are used in the culinary purpose The whole plant is applied externally for inflammations and for allaying irritations. Compound formulations for bleedings piles are processed in the juice of Shallot leaves. The seeds are also used in prescriptions for bleeding piles. The seeds are used in aphrodisiac formulations, as a tonic to the reproductive system. for dysentery in which roasted seeds are prescribed	A preparation of the bulb combined with honey is said to be a useful application in burns
2.	<i>Allium fistulosum</i> L.	Eng-Japanese leek, Welsh onion, cibol, stone leek. Chinese Onion	Whole plant Bulb Root	The whole plants possess neurostimulant, stomachic and antibacterial properties They are effective in the treatment of coryza, influenza, headache, fever, dyspepsia, intestinal infections, rheumatism and toothache. A poultice of pounded fresh bulbs is effective in treating furunculosis, especially axillary and inguinal boils bulb is also used as dressing for sores, boils and abscesses Its roots are used in the form of tea as children's sedative	Inhalation of the vapour from a boiling decoction is active on coryza, influenza and fever
3.	<i>Allium ursinum</i> L.	Ramsons Broad-leaved Garlic, Wild Garlic, Wood Garlic	Leaf Whole plant	Externally, the bruised leaves may be applied to abscesses and boils. They lower high blood pressure and help to prevent arteriosclerosis. It ease stomach pain and are tonic to the digestion, they have been used for	It is currently much used in juice form for slimming diets.

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S.No.	Plant name	Other name	Plant part	Uses	Recipe
4.	<i>Allium ampeloprasum</i> L. var. <i>porrum</i> (L.) Gay. Syn. <i>Allium porrum</i>	Winter leek, Benn-Paru, Hin-Vilaiti lasan, Gandina, Kirath, Mar-Khorat, Vilaiti lasan	Whole plant Bulb	As stimulant and applied externally to promote suppuration of boils. It is also used in seasoning	
5.	<i>Allium cepa</i> L.	Eng- Onion, Hin-Pyaj, Kan-Nirulli, Mal-Cavannulli, Ceriya ulli, San-Palanduh, Raktakanda, Tamil-Venkayam, Trulli, Telagu-Ulripaya, Ulligadda, Erragadda.	Bulb	The bulbs are sweet, aromatic, thermogenic, antiperiodic, antibacterial, aphrodisiac, emmenagogue, emollient, expectorant, carminative, stomachic, diuretic, anodyne and tonic. They are useful in haemorrhoids, dysentery, flatulence, dyspepsia, colic, jaundice, splenopathy, hepatopathy, pneumonopathy, asthma, bronchitis, ophthalmia, vomiting, otalgia, pharyngodynia, malarial fever, lumbago, epilepsy, tumours, wounds paralysis, arthralgia, leucoderma and skin diseases.	The juice from the onion bulb is applied into eyes for ocular infections; an infusion made from the bulb is applied externally to treat haemorrhoids; and the bulb is warmed in oil and applied to skin abscesses. The juice is used in several types of hysterical attack. A few drops when rubbed to the skin encourages hair growth. A few drops in the external auditory meatus improves the hearing. It gets rid of freckles and soothes the pain of insect stings; when applied to the skin it repels mosquitoes and it aids scar formation on wounds. Juice extract is used with honey against dysentery in Chotanagpur. In Jhalawar district of Rajasthan, mature bulbs are crushed to extract juice which is applied locally to relieve pain of scorpion sting. One-teaspoon juice mixed with cold water cures fever, but when it is mixed with warm water relieves constipation. In Rajasthan, the bulb fried in butter is given for three days to cure piles. The patient is advised to avoid curd for six days. Bulbs are crushed and held near the nose or

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S.No.	Plant name	Other name	Plant part	Uses	Recipe
6.	<i>Allium sativum</i> L.	Eng-Garlic; Teli-Velluli tellagadda; Beng-Lashar, lashun, rasun; Guj-Lasan; Hin-Lahsan; Kan- Belluli; San-lashuna and Tam-Vallai-pundu.	Bulb	The bulb constitutes an antibacterial, anti-inflammatory amoebiasis, oxyuriasis and colitis. The juice acts as an insect repellent and neutralizes the poison of their bites and stings; it is an excellent glue and it also enables holes to be made cleanly in glass. It cure cough, bronchitis and pertussis. The aqueous solution of bulb juice in a nasal instillation and a gruel made with the bulbs are active on coryza and influenza. It is also hypocholesterolaemic and thus useful in hypercholesterolaemia and atherosclerosis. A poultice of pounded bulb is used to treat boils, abscesses, phlegmons and centipede bites. Fresh cloves of garlic are used externally by friction to treat dermatitis	juice is dropped in nostril in temporary unconsciousness or fainting by the Dubala tribes of Dadara Nagar Haveli and Daman. Bulbs are used for the treatment of rheumatism by the tribal healers of Baghmundi (W.B.). The juice of bulb is diuretic and carminative. In Saurashtra, bulbs are used for controlling and curing jaundice
				Five cloves of <i>A. sativum</i> fried with Ghee are used to cure rheumatism. Besides, there are reports of using the bulb in lowering cholesterol and as antihypertensive. The Mishing tribe of Assam in body pain use it in combination with <i>Spilanthes acemella</i> , <i>Paederia foetida</i> L., <i>Cyclosorus extensa</i> and <i>Zingiber officinale</i> . Bulb is ground to make a paste, which is taken internally with water in little amount daily for the treatment of ascites by the Bodo tribe of Nalbari district of Assam. In tribal communities of Kamrup district of Assam, it is given as decoction for the treatment of malaria in combination with crushed rhizome of <i>Acorus calamus</i> and leaves and roots of <i>Achyranthes aspera</i> . It is also used for curing gout and swelling. Few cloves are mixed with entire plant of <i>Mimosa pudica</i> , fruits of <i>Urena lobata</i> , leaves of <i>Sida cordifolia</i> in equal parts and made paste, warmed and applied once or twice daily till cure. Bulb cloves are taken regularly to increase sexual potency by the tribals of Daman	

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S.No.	Plant name	Other name	Plant part	Uses	Recipe
7.	<i>Allium schoenoprasum</i> L. Syn. <i>Allium sibiricum</i> L.	English- Chives, Cies. Hin- Piazzi. Trade name-Piazi	Bulb	The native people use it for curing various diseases including treatment of cough and cold, as wormicide and also against insect bite, stings, burns, sores, as well as, snake bite.	Extract of bulb used as cardiac depressor.
8.	<i>Allium tuberosum</i> Rottl. Ex Spring	English- Chinese chive Fragrant onion, Indian leek. Hin- Bangagandina, Mar-Bungaghunduna.	Leaves and bulbs Seeds	The young leaves and bulbs are used for seasoning. Seed are used in spermatorrhoea.	
9.	<i>Allium govanianum</i> Wall (V. Faran., Dhungar)		Leaves	The leaves are used in wounds and cuts.	
10.	<i>Allium triquetrum</i> L.	English-Triangle onion, Triangular- Stalked Garlic	Whole plant	Facial oedema, coughing, sneezing, and lachrymation one or two hours after handling	
11.	<i>Allium odorum</i> L.	Eng-Sweet leek, fragrant-flowered garlic, Chiese chives.	Leaves and Bulbs Seed	The leaves and the bulbs possess antibacterial properties. They are useful for the treatment of haemoptysis, epistaxis, cough, sore throat, asthma, dyspepsia and dysentery. They are also used in an anti-inflammatory poultice The seeds are active on spermatorhoea, haematuria, lumbago, arthrodynia and metrorrhoea	
12.	<i>Allium vineale</i> L.	English Name-Crow Garlic	Bulb	Bulb exhibited weak lachrymatroy activity	

compiled by the personal survey and by cross checking from the published reports⁹⁻²⁰.

Medicinal diversity in the *Allium* species was recorded after critical screening of the available literature and self survey. Medicinal uses of plants of *Allium* species has been compiled to emphasize the need for future scientific evaluation of all the folk claims. Therefore, it is logical to make scientific evaluation of potential *Allium* species for the development of new or better drugs and also to validate their uses in the traditional system.

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