1. INTRODUCTION
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The plants are known to play a significant role in alleviation of agonies of human and animal life in days of antiquity as far back as history can take us. Even in modern times plants occupy an important place in medicine, as is evident from a study conducted in U.S.A., that every alternate prescription contains at least one plant constituent (Farnsworth, 1973).

In the past, fresh juices or crude extracts of the plants were used as medicines but now as a result of modernisation and availability of sophisticated methods of isolation and evaluation, the plant drugs usually find their way into medicine as pure constituents rather than in the form of galenical preparations. The important groups of drugs obtained from plants are alkaloids, glycosides, antibiotics, vitamins, enzymes, fixed and volatile oils and plant exudates like gums, resins and tannins.

Keeping in view the importance of plant products in current medicine, a study has been undertaken to determine the constituents and assess the pharmacological effects of the constituents of the fruits of Withania coagulans Dunal, a widely used medicinal plant in the
Ayurvedic system but uninvestigated so far.

The name Withania is supposed to be in honour of H. Witham, a British geologist (Collett, 1921). The genus *Withania* Pauq belongs to a well-known alkaloids containing family *Solanaceae*. It consists of 10 species (Trease and Evans, 1978), out of which only 4 or 5 species occur in India (Hooker, 1885; Kirtikar and Basu, 1933; Deb, 1980). *Withania somnifera* and *Withania coagulans* are well-known medicinal plants of this genus and are described in Indian system of medicine.

Fruits of *Withania coagulans* commonly known as Akri or Puneer dodi in Hindi are available with local grocers and hakims. These are of high repute both in Ayurvedic and Unani systems of medicine and their multifarious therapeutic values have been well documented in Indian literature (Bamber, 1916; Collett, 1921; Kirtikar and Basu, 1933; Nadkarni, 1954; Chopra et al, 1956).

In Indian system of medicine, the fresh berries of *Withania coagulans* are used as emetic. The dry fruits are employed for the treatment of skin affections, asthma, biliousness, flatulent colic, dyspepsia, and other
intestinal diseases. The fruits are excellent bitter tonic. These are alterative, diuretic and also reported to be effective in strangury, lumbago, chronic liver complaints, and inflamed piles. These are said to possess anodyne or sedative properties. Their aqueous extract, the preparation commonly administered, possesses enzymatic effect of milk coagulation and this property has been utilised for manufacturing cheese.

The seeds are emmenagogue, diuretic, useful in lumbago, ophthalmia and lessen the inflammation of piles. Leaves are used as febrifuge.

In Unani system of medicine the fruits are called 'Tukhme Heyat' and are used as emmenagogue, in urinary tract infection and to relieve nervous tension (Wahid and Siddiqui, 1961).

Botanical description of Withania Coagulans, Dunal Plant

The plant has been described by various workers (Hooker, 1885; Collett, 1921; Kirtikar and Basu, 1933; Ram Kashyap, 1936; Cooke, 1950; Nadkarni, 1954). The common Indian names of the plant are: Hindi: Akri, Puneer dodi; English: Vegetable rennet; Bengali:
Fig. 1: Fruits of *Withania coagulans* Dunal.
Ashwagandha; Punjabi: Panir, Khambjira. It grows in Punjab, Sind, Sutlej Valley, Afganistan and Baluchistan. It grows in the month of November to April and blooms in December.

It is perennial undershrub, 0.3-0.9 metre high, all parts clothed with dense grey or yellowish white tomentum, leaves: 2.5-5.7 by 1-2.2 cm, entire, obtuse. Flower: 1.2 cm in diameter, pale yellow, dioecious in axillary clusters. Fruits: 6-8 mm in diameter, smooth, closely girt by the enlarged membranous calyx (Fig.1). Seeds are 2.5-3 mm in diameter, discoid.

The plant of Withania somnifera, a closely related species is 0.3-1.5 metre high, leaves are 5-10 by 2.5-5 cm. Flowers: greenish yellow; hermaphrodite. Berry: loosely enclosed in the acrescent calyx and is red when ripe. It grows in dry parts of India.