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STUDIES ON QUALITATIVE PHYTOCHEMICAL SCREENING OF *ETHNOMEDICINAL PLANT ARGYREIA SPECIOSA* (LINN.F.) SWEET FROM HADOTI REGION OF RAJASTHAN.

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Argyreia speciosa belonging to family Convolvulaceae is an important 'rasayana' herb used extensively in the Ayurvedic system of medicine to cure many health ailments of people. It is commonly known as Elephant creeper or Woolly morning glow in English and in Sanskrit it is called as Vridhadaraka meaning 'anti-aging'. *Argyreia speciosa* (Linn.f.) sweet invites attention of the researchers worldwide for its pharmacological activities ranging from aphrodisiac to nematicidal activities .Traditionally leaves are used by Rajasthani tribes to prevent conception. Seeds of *Argyreia nervosa* are found to relieve hypotension, it possess spasmolytic and anti-inflammatory activity. Chemical analysis revealed that the roots of the plant possess immunomodulatory activity against the myelo-suppressive effects. It has multifarious biological activities and used traditionally to treat various diseases.

Preparation of extracts:

The roots were obtained from the wild areas of Hadoti region and authenticated in Herbarium, University of Rajasthan; Jaipur (RUBL).Sun dried roots were grinded finely to conduct different qualitative tests. About 500g of the powder was subjected to soxhlet apparatus extraction for 12 hours using 5 liters of methanol and ethanol as a solvent. The extract was made free from solvent by keeping it on a water bath at 50-60°C.

Phytochemical test

The freshly prepared methanolic and ethanolic extracts of *A. speciosa* were subjected to standard phytochemical screening tests for various phytochemical constituents. The phytochemical screening revealed the presence of alkaloids, resins, carbohydrate, flavonoids,

triterpenes, and tannins in methanolic extract of *A. speciosa*. Aqueous extract was reported to contain carbohydrates and proteins. Thus the activity of *A. speciosa* could be due to flavonoids and triterpene components (1,2,3). Alkaloids possess many medicinal properties like anti-inflammatory, anti-asthmatic and may further alter immunological status.Flavonoids are potent antioxidants with free radical scavenging activity that prevent cell damage and have strong anti-cancer activity. Phytochemical screening of the plant has shown the presence of lipids triterpenes (4). The ethnomedicinal plant identified during the survey in the region possess active constituents which are used for curing various health ailments of the tribals.The phytochemical test revealed the presence of chemical constituents mentioned in Table 1.

The following tests were performed to identify the chemical constituents present in the ethnomedicinal plants.

Test for Alkaloids: Methanolic extract shown yellow colorations while treated with Mayer's reagent to confirmed presence of alkaloids.

Test for Flavonoids: Only ethanolic solution when treated with few drops of lead acetate showed a yellow ring but methanolic solution did not give any result.

Test for Tannins: A white precipitate in both the test tubes when treated with gelatin solution showed presence of tannins in both solvents.

Test for Carbohydrates: Both extracts when treated with Benedict solution gave an orange colour confirmed presence in both solvents.

Test for Terpenoids: Both extracts when treated with Nollers reagent, ethnolic extract turned pink confirmed presence of terpenoids in it.

Test for Steroids: Steroid found absent in both extracts.

Test for glycosides: 5 ml of each extracts were hydrolysed with 3ml dilute sulphuric acid boiled and add benzene in it.When Ammonia was added, both turned red to show presence of glycoside.

Test of Phenols: When 3-4 drops of ferric chloride solution added a black coloured solution only in methanolic extract indicated the presence of phenols.

Table 1Qualitative phytochemical screening test of *Argyreia speciosa*

S. No	**Chemical Constituents**	*Argyreia speciosa*	
		Methanol	**Ethanol**
1	**Alkaloids**	+	-
2	**Flavonoids**	-	+
3	**Tannins**	+	+
4	**Carbohydrates**	+	+
5	**Terpenoids**	-	+
6	**Protein**	-	-
7	**Saponins**	+	+
8	**Phenols**	+	-

Note: "-" sign indicates no activity "**+**" indicates activity

The phytochemical screening revealed the presence of alkaloids, saponins, carbohydrate, flavonoids and tannins in methanolic extract of *A. speciosa* extract. Aqueous extract was reported to contain carbohydrates and proteins. Thus the activity of *A. speciosa* could be due to flavonoids and triterpene components.Alkaloids possess many medicinal properties like anti-infammatory, anti-asthmatic, and may alter immunological status. Flavonoids are potent antioxidants with free radical scavenging activity thus reports of being rejuvenator is based on this fact. Chemical analysis revealed that the roots of *Argyreia speciosa* proved to have immunomodulatory activity(5,6,7,8). Traditionally leaves are used by ethnic races of study area to prevent conception**,** stomach complaints, foot sores, small pox, syphilis, dysentery, and diarrhea. Indigenous people also reported treatment of ringworm,

eczema, itching and other skin diseases with poultice of *A.speciosa* leaves(9,10,11)**.** In spite of being illiterate tribal were well informed about the major differences in both species of *Argyreia.i.e. A. speciosa and. A.nervosa*. The uses of both plants in curing health ailments of the indigenous people was well known.

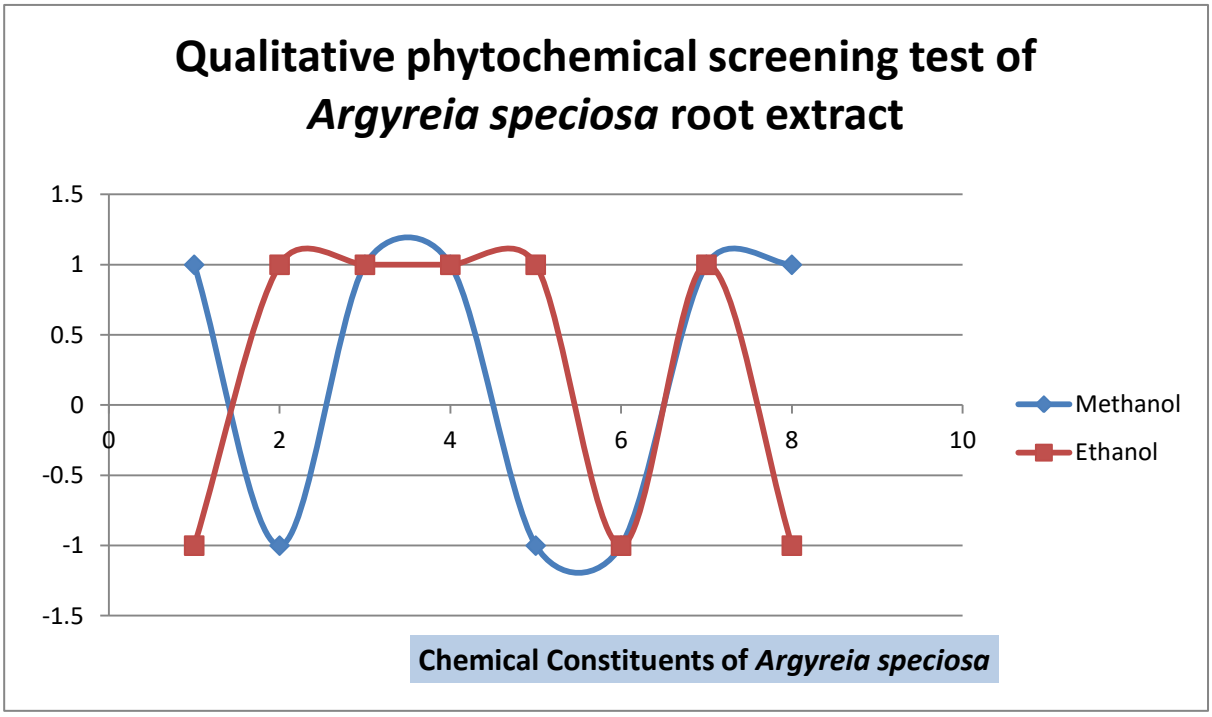

Fig 1 Qualitative phytochemical screening test of *Argyreia speciosa*

The results of the phytochemical analysis show that further study with regard to isolation, purification and characterization of active principle needs to be explored in the area proposed for study. Detailed pharmacological screening of each isolated component to be evaluated for its immunomodulatory and antioxidant activity and probable mechanism of action to be explored which can play an important role in manufacture of novel drugs in present scenario.

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