



SERVEY AND COLLECTION OF SOME MEDICINAL PLANTS IN COLEGE CAMPUS

Project Report

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Certificate

This is to certify that the work incorporated in the project report on **Survey & collection of some medicinal plant in college campus** by **Miss. Pratiksha S. Hapse, Miss. Siddhika A. Bankar, Miss. Gouri J. Bankar** are students of Arts, Commerce and Science College Sonai, Tal.- Newasa, Dist. Ahmednagar. Affiliated to the Savitribai Phule Pune University Pune successfully completed project.

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Declaration

We hereby declare that the work done in this thesis entitled "**Survey & collection of some medicinal plant in college campus**" is submitted to Department of Botany, Arts, Commerce and Science College Sonai. This project is completed under the DBT Star College Scheme and the supervision of Mrs. Ayanar A. T. The work is original and not submitted in part or full by me or any other to this or any other University.

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INDEX

Sr. No.	Content	Page No.
1	Introduction	6
2	Objectives	7
3	Material & Method	8
4	Observation table :- Detail information of medicinal plants	8
5	Result and Discussion	17
6	Conclusion	17
7	References	18

INTRODUCTION:

Indian medicinal plants, Ayurvedic medicinal plants are plants using in ayurveda mainly as medicinal purpose. They are backbone of ayurveda. Charaka Sushruta and Vagbatta are main classical text books on Ayurveda where uses,, treatment and properties of them describes detailed. There have most important role to treatment principal. Ayurvedic medicinal plans are gateway miracles! if way of treatment and basic principles of is correct.

Vata Pitta & Kapha are the three elements which have different properties to give our body mind and everything normal. Ayurvedic medicine plans classified according to their properties like Rasa, Guna, Virya, Vipaka. This classification help us how to manage work medicinal plans to cure diseases. Ayurveda says vitiation, abnormal increase in Vata, Pitta & Kapha are main cause of disease. Vitiation is due to increase or decrease of similar properties.

So proper identification Conservation of Ayurvedic medicinal plants is important in the field of treatment. So you need to know which medicinal plants are present in your specific area. Sonai is a small town located at a distance of 5 km from the temple of Shanishinganapur in Ahmednagar district. We have surveyed the medical plant present in New Arts Commerce and Science College Sonai in Sonai. Because you need to know which medicinal plants exist in our area, and at the same time you need to preserve them.

OBJECTIVE

1. Understand the use of medicinal plants for treatment.
2. To check the present status and reliability on traditional system of medicine
3. To increase awareness about conservation of medicinal plants

MATERIAL AND METHOD:

In the present study, we has visited the New Arts Commerce Science college Sonai campus area. We surveyed the some medicinal plant present in college campus. Instead of collection of medicinal plants we has taken photographs of that plants. We studied plants on the basis of their, family group, plant part used, medicinal uses and chemical compound present within them. We have collected information about plants from reference books and different website of Google.

OBSERVATIONS:

Table No. 1 List of Medicinal Plants

Sr. No.	List of medicinal plants
1)	<i>Aloe vera</i>
2)	<i>Calotropis procera</i>
3)	<i>Ocimum sanctum</i>
4)	<i>Rosa damascena</i>
5)	<i>Emblica officinalis</i>
6)	<i>Pongamia pinnata</i>
7)	<i>Azadirachta indica</i>
8)	<i>Asparagus racemosus</i>
9)	<i>Santalum album</i>
10)	<i>Adhatoda vasica</i>
11)	<i>Hibiscus rosasinensis</i>
12)	<i>Annona squamosa</i>
13)	<i>Aegle marmelos</i>
14)	<i>Tamarindus indica</i>
15)	<i>Clitoria ternatea</i>

Table No.2 Observation table :- Detail information of medicinal plants

Botanical name	Family name	Chemical compound	Medicinal uses
<i>Aloe vera</i> Tourn. ex Linn Common name Korphad	Liliaceae	The two-main class active constituent of the Aloe vera plant extract are chromone and anthraquinone and its glycoside derivatives, alongside others such as phenylpyrone derivatives, flavonoids, phenylpropanoids, coumarins phytosterols,(1)	It has antioxidant and antibacterial properties. ... It accelerates wound healing. It reduces constipation. ... It may improve skin and prevent wrinkles. ... It lowers blood sugar levels. (2)
<i>Calotropis gigantea</i> (Linn.)R.Br. Common name Moithi rui	Asclepiadaceae	The preliminary phytochemical screening of leaf powder of <i>Calotropis procera</i> showed that the leaves contained cardenolides, steroids, tannins, glycosides, phenols, terpenoids, sugars, flavonoids, alkaloids and saponins (3)	The twigs are applied for the preparation of diuretics, stomach tonic and anti-diarrhoeics and for asthma. Also used in abortion, as an anthelmintic, for colic, cough, whooping cough, dysentery, headache, lice treatment, jaundice, sore gums and mouth, toothache, sterility, swellings and ulcers. The extremely poisonous roots are used in the treatment of snakebites.(4)
<i>Ocimum sanctum</i> Linn. Common name Krishna tulas.	Lamiaceae	Fresh leaves and stem of <i>Ocimum sanctum</i> extract yielded some phenolic compounds (antioxidants) such as cirsilineol, circimaritin, isothymusin, apigenin and rosameric acid, and appreciable quantities of eugenol. The leaves of <i>Ocimum sanctum</i> contain 0.7% volatile oil comprising about 71% eugenol and 20% methyl eugenol. The oil also contains carvacrol and sesquiterpine hydrocarbon caryophyllene. (5)	Tulsi is also known as "the elixir of life" since it promotes longevity. Different parts of the plant are used in Ayurveda and Siddha systems of medicine for prevention and cure of many illnesses and everyday ailments like common cold, headache, cough, influenza, earache, fever, colic pain, sore throat, bronchitis, asthma, hepatic diseases, malarial fever, as an antidote for snake bite and scorpion sting, flatulence, migraine headaches, fatigue, skin diseases, wound, insomnia, arthritis, digestive disorders, night blindness and diarrhea. (5)
<i>Rosa damascena</i> Mill. Common name Gulab	Rosaceae	Isolated petals of <i>R. damascena</i> contain anthocyanins, terpenes, flavonoids and glycosides. <i>Emblica officinalis</i> primarily contains tannins, alkaloids, phenolic, amino acids and carbohydrates. Its fruit juice contains the highest amount of	It is a nervine tonic prescribed in depressive patients. A herbal formulation known as Gulkand is formulated from roseflowers, which is useful in constipation. It elevates mood and prevents depressive effects. It has antistress activity and is used in nervous

		<p>vitamin C (478.56 mg/100 mL). The fruit when blended with other fruits boosted their nutritional quality in terms of vitamin C content (7)</p>	<p>tension. It is also effective in gastric ulcer and cardiovascular diseases. It helps in digestion and increases bile production. It cures the uterine disorders and high blood pressure. Flowers contain different vitamins including vitamins A, B3, C, D and E. It is used in stress, nervous tension and depression. (7)</p>
<p><i>Emblica officinalis</i> Gaertn. Common name Amla</p>	Euphorbiaceae	<p><i>Emblica officinalis</i> primarily contains tannins, alkaloids, phenolic, amino acids and carbohydrates. Its fruit juice contains the highest amount of vitamin C (478.56 mg/100 mL). The fruit when blended with other fruits boosted their nutritional quality in terms of vitamin C content (6)</p>	<p>Liver toxins, high blood cholesterol, and age-related kidney disorders have all been scientifically proven to be corrected with the antioxidant properties contained in amla berries. Amla fruits are used as a diuretic, refrigerant and laxative. Dried fruits are given in diabetes and dysentery. They are also administered in jaundice, dyspepsia and anemia along with iron compound. It is reported that fixed oil from fruits possess the property of promoting hair growth. Seeds of the fruits are used in treatment of asthma and bronchitis(6)</p>
<p><i>Pongamia pinnata</i>(Linn.) Merr Common name Karanj</p>	Fabaceae	<p>The plant is rich in <u>polyphenolic compounds</u>. <i>Pongamia pinnata</i> showed presence of <u>flavonoids</u>, polyphenols and volatile oils. Pongamol and karangin are active polyphenols isolated from the fruits of this plant (9)</p>	<p>The fruits and sprouts are used in folk remedies for abdominal tumours in India, the seeds for keloid tumours in Sri Lanka and a powder derived from the plant for tumours in Vietnam. In Sanskrit India, seeds were used for skin ailments. Today, the oil is used as a liniment for rheumatism. Leaves are active against Micrococcus; their juice is used for cold, coughs, diarrhoea, dyspepsia, flatulence, gonorrhoea and leprosy. Roots are used for cleaning gums, teeth, and ulcers. (8)</p>
<p><i>Azadirachta indica</i> Common name Neem</p>	Meliaceae	<p>In addition to azadirachtin and related <u>limonoids</u>, the seed oil contains <u>glycerides</u>, diverse <u>polyphenols</u>, <u>nimbolide</u>, <u>triterpenes</u>, and <u>beta-sitosterol</u>. The yellow, bitter oil has a <u>garlic-like</u> odor and contains about 2% of limonoid</p>	<p>Its fruits and seeds are the source of neem oil. Neem leaf is used for leprosy, eye disorders, bloody nose, intestinal worms, stomach upset, loss of appetite, skin ulcers, diseases of the heart and blood vessels (cardiovascular disease)</p>

		compounds. The leaves contain <u>quercetin</u> , <u>catechins</u> , <u>carotenes</u> , and <u>vitamin C</u> .(11)	, fever, diabetes, gum disease (gingivitis), and liver problems. The leaf is also used for birth control and to cause abortions. (10)
<i>Asparagus racemosus</i> Common name Shatavari	Asparagaceae	The major active constituents of <i>Asparagus racemosus</i> are steroidal saponins. Isoflavones, asparagine, racemosol, polysaccharides, mucilage, vitamins A, B1, B2, C, E, Mg, P, Ca, Fe, and folic acid present in roots.(13). Other primary chemical constituents of <i>Asparagus</i> are essential oils, asparagine, arginine, tyrosine, flavonoids (kaempferol, quercetin, and rutin), resin,	People use <i>asparagus racemosus</i> for upset stomach (dyspepsia), constipation, stomach spasms, and stomach ulcers. It is also used for fluid retention, pain, anxiety, cancer, diarrhea, bronchitis, tuberculosis, dementia, and diabetes. Some people use it to ease alcohol withdrawal. (12)
<i>Santalum album</i> Linn. Common name Chandan	Santalaceae	Sandalwood oil contains more than 90% <u>sesquiterpenic alcohols</u> of which 50–60% is the <u>tricyclic α-santalol</u> . <u>β-Santalol</u> comprises 20–25%. (15)	In manufacturing, white sandalwood oil is used as a fragrance in soaps, cosmetics, and perfumes. White sandalwood is used for treating the <u>common cold</u> , <u>cough</u> , <u>bronchitis</u> , <u>fever</u> , and <u>sore mouth</u> and <u>throat</u> . It is also used to treat urinary tract infections (UTIs), liverdisease, gallbladder problems, heatstroke, gonorrhoea, head ache, and conditions of the heart (13) (14)
<i>Adhatoda vasica</i> Common name Adulsa	Acanthaceae	The principle constituents of <i>Vasaka</i> are its several alkaloids, the chief one being vasicine. The leaves contain two major alkaloids called vasicine and vasicinone ² , The principle constituents of <i>Vasaka</i> are its several alkaloids, the chief one being vasicine. The leaves contain two major alkaloids called vasicine and vasicinone ² , (16)	The leaves, roots and the flowers are extensively used in indigenous medicine as a remedy for cold, cough, bronchitis and asthma. In acute stages of bronchitis it gives unfailing relief. especially where the sputum is thick and sticky. It liquifies tilt sputum so that it is brought up more easily. For relief in asthma, the dried leaves should be smoked. (16)
<i>Hibiscus rosasinensis</i> Common name Jasvand	Malvaceae	The preliminary phytochemical analysis showed that <i>Hibiscus rosa-sinensis</i> contained tannins, anthraquinones, quinines, phenols, flavanoides, alkaloids, terpenoids, saponins, cardiac glycosides, protein, free amino acids, carbohydrates, reducing	Decoction of leaves, root Chemical constituents, pharmacological effects and therapeutic importance of <i>Hibiscus rosasinensis</i> and fruits were helpful in treatments of arthritis, boils and coughs. (17)

		sugars, mucilage, essential oils and steroids (17)	
<i>Anona squamosa</i> Linn. Common name Seetaphal	Annonaceae	It consistof alkaloid atisine in their root. They contain other alkaloids <u>oxophoebine</u> , <u>reticuline</u> , <u>isocorydine</u> . <u>Flavonoid quercetin-3-O-glucoside</u> . (18)	The leaves are used in a decoction to treat dysentery and urinary tract infection (18)
<i>Aegle marmelos</i> Corr. Common name Bel.	Rutaceae	The bael tree contains <u>furocoumarins</u> , including <u>xanthotoxol</u> and the methyl ester of alloimperatorin, as well as <u>flavonoids</u> , <u>rutin</u> and <u>marmes in</u> . a number of essential oils (19)	This plant is used in traditional medicine treatments, such as intermittent fever, intestinal ailments, fertility control and treatment after childbirth and fish poison. (19)
<i>Tamarindus indica</i> Linn Common name Chinch.	Caesalpinaceae	It consist β -amyrin, compesterol, β -sitosterol and seven hydrocarbons. The aerial parts of this plant have demonstrated the presence of tartaric acid, acetic acid, and succinic acid, gum, pectin, sugar, tannins, alkaloid, flavonoids, sesquiterpenes, and glycosides. (21)	The bark is astringent and tonic and its ash may be given internally as a digestive. Incorporated into lotions or poultices, the bark may be used to relives sores, ulcers, boils and rashes. It may also be administered as a decoction against asthma and amenorrhoea and as a febrifuge (20)
<i>Clitoria ternatea</i> Common name Gokharn	Fabaceae	The preliminary phytochemical screening showed that the plant contained tannins, phlobatannin, carbohydrates, saponins, triterpenoids, phenols, flavanoids, flavonol glycosides, proteins, alkaloids, anthraquinone, anthocyanins, cardiac glycosides, Stigmast-4-ene-3,6-dione, volatile oils and steroids (23)	The roots are bitter, powerfully cathartic, diuretic and purgative. The powdered, ripe seeds are aperient and purgative (22)

PHOTO OF MEDICINAL PLANTS:



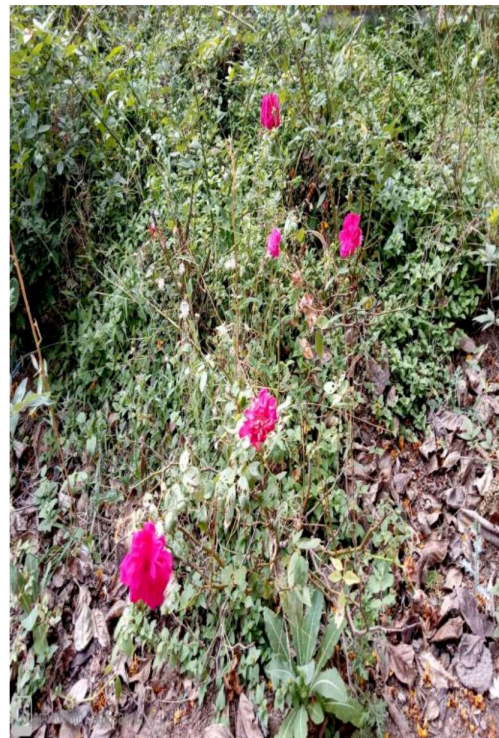
1. Aloe vera



2. Calotropis procera



3. Ocimum sanctum



4. Rosa damascena



5. *Emblica officinalis*



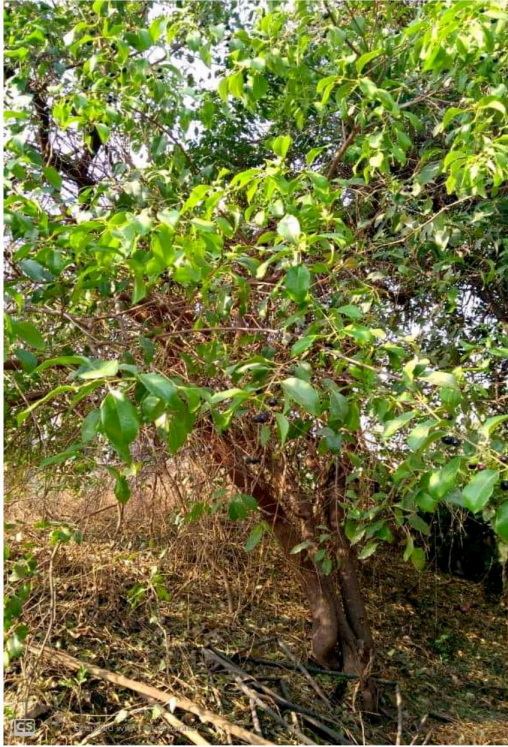
6. *Pongamia pinnata*



7. *Azadirachta indica*



8. *Asparagus racemosus*



9.Santalum album



10.Adhatoda vasica



11.Hibiscus rosasinensis



12.Annona squamosa



13.Aegle marmelos



14.Tamarindus indica



15.Clitoria ternatea

RESULT AND DISCUSSION:

. The botanical, common and family name, chemical compound, medicinal uses of fifteen plants are enumerated in table no. 2. Fifteen plants having medicinal importance are reported.

CONCLUSION

We observed that each and every medicinal plants contain medicinal properties. They are used for treating various diseases of living organism. The conservation & replantation of all plants is very important to survival of all living things.

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