

Documentation of Medicinal Plants from B.V.M. College of Pharmacy Campus, Gwalior Madhya Pradesh, India

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Abstract

Gwalior-Chambal area is known as rich herbal diversity region of M.P state in India because variety of medicinal plants is being found here. Various parts of these medicinal plants like root, stem, bark, leaf, fruit etc may used traditionally as indigenous medicine., current research work is a useful account on medicinal Plants in B V M college of Pharmacy campus, Gwalior,(M.P). Medicinal Plant diversity Survey was carried out in the Period of October 2021 to June 2022 in the institution. After the field survey, observed medicinal plants were identified and their medicinal uses were searched from available literature, total 93 medicinal plant species were identified which belongs to 55 families. Out of 93 medicinal plants 19 were trees, 35 shrubs and 39 were herbaceous species. It was also observed that the institution is rich in plants of Liliaceae family, and the leguminosae family is the second largest plant family of this campus. Lamiaceae and solanaceae families are third largest group of the plants in the campus.

Keywords: BVM college • Diversity • Field survey • Medicinal plants • Survey

Introduction

Plants are one of the most important sources of medicines. The applications of plants as medicines date back to Prehistoric period. In India the references to the curative properties of some herbs in the Rig-Veda seems to be the earliest record of use of plants in medicines. Approximately 3000 plants species are known to have medicinal properties in India [1-10].

The Rig-Veda (3700B.C) mentions the use of medicinal plants, our traditional system of medicine, like Ayurveda, unani Siddha and homeopathy etc use herbs for treatment. It is estimated that 40% of the world population depends directly on plant based medicines for their healthcare. In India medicinal plants offer low cost and safe health solutions [11-15].

Ganga Yamuna Plains covering an area of about 3.75 lakh km in the states of India, which is formed by the deposition of sediments brought by the river Ganga and Yamuna in the quaternary period of cenezoic era. Since ancient days the Brazmandalam of Ganga Yamuna plains has been rich in floral diversity the variety of medicinal plant growing in wild states due to favorable climatic and edaphic conditions in this region (Table 1).

Gwalior district is in Part of Brazmandal region, where BVM College of Pharmacy is situated the area of campus in around 20 acres. Environment of the area is quite pleasant. College campus is containing diversity of vegetation. Various gardens are present in the college campus. Diversity of medicinal plant is present in these gardens. Aim of the present study was to carry out a regular survey in the gardens of college campus for documenting the medicinal plant distribution in the college campus [16-21].

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Materials and Methods

The study was conducted in the B V M College of Pharmacy Campus, Gwalior Madhya Pradesh, India. The Campus was regularly visited for collection of medicinal plants or plants parts. They were freshly collected. From the collected plants a herbarium of medicinal plants was prepared in the laboratory and their identification was done by the following literature-

1. Review on Indian Medicinal plants by A.K.Gupta.
2. Flora of British India by J.D. Hooker.
3. Flora of India
4. Medicinal plants of India and Pakistan by J.F. Dastur.
5. Medicinal Plants by S.G. Joshi
6. Ayurvedic plants by P.Kulkarni.
7. Review on Indian Medicinal plants by N.Tandon.

Result

During the year 2021-22 in the survey of medicinal plants more than 90 medicinal plants belongs to 47 families of dicots and 08 families of monocots were reported which are used in the treatment of malaria, dengue, cough, cancer, Piles, diabetes, Jaundice, Fever, Gastric, Disorders etc.

Conclusion

Herbal medicine occupies a vital sector of healthcare system in India. Medicinal plants are major natural resource for medicine. This study allowed us to identify species of plants belonging to various families that are present in BVM College of Pharmacy, Gwalior (M.P). The result of the study also shows the use of those plants. As this region gets highly affected by malaria and dengue, plants like *Azadirachta indica*, *Senna tora*, *Alstonia scholaris*, *Nerium indicum*, *Manikara zapota*, *Ocimum tenuiflorum*, *cynodon dactylon* etc, can serve as some important herbals having anti-malarial and anti-dengue potential. Herbal traditional agents and their phytochemicals have high ability to deliver medication to the market in the near future. Therefore, there is a need to conduct more ethanomedical researches to document and to gain benefit in healthcare industry before these resources disappear.

Table 1. Common name, botanical name, family, medicinal uses and part used.

S.No.	Common name	Botanical name	Family	Medicinal use	Parts use
1	Aam, Mango	<i>Magnifera Indica</i>	Anacardiaceae	Leaves are useful for treating diabetes,	Leaves
2	Bougainvillea	<i>Bougainvillea Glabra</i>	Nyctaginaceae	Antidiabetic, Antihepatotoxic, Antiulcer.	Upper aerial parts
3	False Ashoka	<i>Polyalthia Longifolia</i>	Annonaceae	Antioxidant, Antimicrobial	Seed oil
4	Vidhya, Thuja	<i>Thuja Occidentalis</i>	Curpessaceae	Respiratory tract infections, Antimicrobial, Anti-Arthritis	Leaf oil
5	Jungli Gulab	<i>Rosa Webbicina</i>	Rosaceae	Source of Vit. C	Dried fruits
6	Vilayati Mehndi	<i>Duranta erecta</i>	Verbenaceae	Antioxidant, Antimicrobial	Leaves
7	Doob Ghas	<i>Cynodon dactylon</i>	Poaceae	Boost immunity, Control sugar	Leaves
8	Chandni	<i>Tabernaemontana divaricata</i>	Apocynaceae	Liver diseases, Hepatitis and Cancer	Flower
9	Hari Tulsi	<i>Ocimum tenuiflorum</i>	Lamiaceae	Asthma, Bronchitis, Cough, Cold etc.	Leaves
10	Neem	<i>Azadirachta indica</i>	Meliaceae	Leprosy, Intestinal worms, Fever, Diabetes	All parts
11	Bargad	<i>Ficus benghalensis</i>	Moraceae	Constipation, Arthritis etc	Leaves & fruits
12	Marua	<i>Origanum majorana</i>	Lamiaceae	Indigestion, Gall stone, liver diseases	Leaves & seeds
13	Nagpaudha	<i>Sansevieria trifasciata</i>	Asparagaceae	Anti-inflammatory, cough, bronchitis, snake bite	Leaves
14	Shahtoot	<i>Moras rubra</i>	Moraceae	Root bark is anthelmintic, sap in treatment of ringworm	Bark, sap
15	Motha	<i>Cyperus rotandus</i>	Cypereaceae	Leprosy, thirst, fever, blood diseases, epilepsy etc	Rhizomes
16	Bhringraj	<i>Eclipta prostrate</i>	Asteraceae	Hair & skin tonic, Stimulant, neuro protective	Aerial parts
17	Makoya	<i>Salanum nigrum</i>	Solanaceae	Eye Disease, Rat poisoning, cough, skin diseases	Whole plant
18	Ber	<i>Ziziphus mauritiana</i>	Rhamnaceae	Source of vit-c, insomnia, soothing effect on nervous system.	Fruits
19	Pila kaner	<i>Thevetia peruviana</i>	Apocynaceae	Intermittent fever, laxative, anti cancer	Leaves
20	Amrood	<i>Psidium guajava</i>	Myrtaceae	Anti-oxidant, source of vit, lower blood, sugar level	Fruits & leaves
21	Sagon	<i>Tectona grandis</i>	Lamiaceae	Laxative, Treatment of Piles, Leucoderma, Dysentery	Leaves & flowers
22	Nimboo	<i>Citrus Limon</i>	Rutaceae	Source of vit-c, stomach upset, cold, kidney problems	Fruits
23	Jamun	<i>Syzygium cumini</i>	Myrtaceae	Anti-diabetic, diuretic, dysentery and gastric troubles	Fruits & leaves
24	Belpatri	<i>Aegle marmelos</i>	Rutaceae	Anti-bacterial, carminative, dysentery, indigestion	Fruits & leaves
25	Shisham	<i>Dalbergia sissoo</i>	Fabaceae	Stimulant, Used in treatment of skin diseases, antipyretic	Leaves
26	Bhamii Amla	<i>Phyllanthus niruri</i>	Phyllanthaceae	Remove toxins and purify blood, Hepato protective	Fruits & leaves
27	Peepal	<i>Ficus religiosa</i>	Moraceae	Used in snake bite, asthma, skin diseases, constipation, dysentery, impotency etc.	Leaves and bark.
28	Mogra	<i>Jasminum sambac</i>	Oleaceae	Anti deprement, antiseptic, aphrodisiac	Flower volatile oil
29	Ghazar ghas	<i>Parthenium Hysterophorus</i>	Asteraceae	Unary tract infection	Upper aerial part
30	Gurhal	<i>Hibiscus-rosa-sinensis</i>	Malvaceae	Antifertility	Flower Leaves
31	Anar	<i>Punica granatum</i>	Lythraceae	In treatment of Cancer, urinary and digestive disorders	Leaves, fruits, flowers
32	Ghrit kumara	<i>Aloe vera</i>	Liliaceae	Hepato protective	Leaves
33	Rai muniya	<i>Brassica nigra</i>	Cruciferae	Used in rheumatism & diuretic	Seeds
34	Rambaas	<i>Agave Americana</i>	Asparagaceae	Antiseptic, diaphoretic, Laxative	Leaves
35	Peeli keli	<i>Canna Species</i>	Cannaceae	Insecticidal	Leaves
36	Laal Keli	<i>Canna Species</i>	Cannaceae	Insecticidal	Leaves
37	Laal Kaner	<i>Nerium Indicum</i>	Apocynaceae	Antimalarial, anticancer antiulcer	Leaves and flower
38	Chirchita	<i>Achyranthes aspera</i>	Amaranthaceae	Hepatoprotective	Seeds, leaves
39	Giloya	<i>Tinospora cordifolia</i>	Menispermaceae	Antipyretic, hepatoprotective	Stem, Leaves
40	Sadabahar	<i>Vinca rosea</i>	Apocynaceae	Anticancer	Aerial parts
41	Deshi gulab	<i>Rosa Chinenesis</i>	Rosaceae	Antiseptic	Flower petals
42	Sudarshan	<i>Crinum latifolium</i>	Amaryllidaceae	Antilice and Anti scabies	Leaves, roots
43	Badi doodhi	<i>Euphorbia hirta</i>	Euphorbiaceae	Antidiarrheal, Antipyretic	Aerial parts
44	Choti Doodhi	<i>Euphorbia macrophyllae</i>	Euphorbiaceae	Antiulcer	Aerial parts
45	Cheel	<i>Callistemon Citrinus</i>	Myrtaceae	Antidiarrhoeal, Anticough	Leaves, bark
46	Laal Siras	<i>Albizia saman</i>	Fabaceae	Astringent, Anticough	Seeds, bark
47	Choulai	<i>Amaranthus spinosus</i>	Amaranthaceae	Antiinflammatory	Leaves
48	Rat rani	<i>Cestrum nocturnum</i>	Solanaceae	Antioxidant, Anti-HIV	Aromatic oil
49	Kamini	<i>Murraya paniculata</i>	Rutaceae	Analgesic	Aromatic oil
50	Ratnajot	<i>Alkanna tinctoria</i>	Boraginaceae	Astringent, Antiulcer	Leaves and Fruits
51	Khatti booti	<i>Oxalis Corniculata</i>	Oxalidaceae	Laxative, Wound healing agent	Leaves
52	Safed Lili	<i>Zephyranthes atamasco</i>	Amaryllidaceae	Antidiabetic, Anticancer	Bulb
53	Croton	<i>Croton species</i>	Euphorbiaceae	Treatment of gall bladder problems	Leaves
54	Genda	<i>Tegetes erecta</i>	Compositae	Antimicrobial	Leaves
55	Ban khazoor	<i>Phoenix dactylifera</i>	Arecaceae	Antidiarrheal, laxative, aphrodisiac	Juice & fruits
56	Shahipam	<i>Roystonea regia</i>	Arecaceae	Antidiabetic	Leaves
57	Jangli methi	<i>Desmodium triflorum</i>	Fabaceae	Antidiabetic	Leaves
58	Amla	<i>Phyllanthus emblica</i>	Phyllanthaceae	Nervine toxic	Fruits
59	Kali tulsi	<i>Ocimum tenuiflorum</i>	Labiatae	Antimicrobial	Leaves

60	Hari Tulsi	<i>Ocimum Sanctum</i>	Labiatae	Antimicrobial	Leaves
61	Mollshri	<i>Mimosa elengi</i>	Sapotaceae	Wound healing	Bark
62	Lal akoua	<i>Calotropis procera</i>	Asclepiadaceae	Respiratory, circulatory and neurological disorder	Whole plant
63	Chota dhatura	<i>Xanthium strumarium</i>	Asteraceae	Laxative, anthelmintic	Leaves and fruits
64	Dhatura	<i>Datura stramonium</i>	Solanaceae	Anthelmintic, analgesic	Seeds
65	Shaitani ped	<i>Alstonia scholaris</i>	Apocynaceae	Fever, Malaria	Bark
66	Krishna neel	<i>Anagallis arvensis</i>	Myrsinaceae	Antitussive, diaphoretic, Diuretic	Whole plant
67	Money plant	<i>Epipremnum aureum</i>	Araceae	Ornamental, Antiradiator	Whole plant
68	Patthar chatta	<i>Bryophyllum pinnatum</i>	Crassulaceae	Stone problems	Leaves
69	Guldoudi	<i>Chrysanthemum indicum</i>	Asteraceae	Usefull in vertigo, fever	Leaves, Flowers
70	Desi khazoor	<i>Phoenix sylvestris</i>	Arecaceae	Useful in debility and weakness	Fruits
71	Papita	<i>Carica papaya</i>	Caricaceae	Digestive	Fruits, latex
72	Kela	<i>Musa paradisiaca</i>	Musaceae	Digestive, Anti-diabetic	Fruits
73	Sarso	<i>Brassica compestris</i>	Cruciferae	Diuretic antifungal	Seeds and Leaves
74	Bathua	<i>Chenopodium album</i>	Amranthaceae	Hepatoprotective	Leaves
75	Jangali palak	<i>Rumex dentatus</i>	Polygonaceae	Astringent	Leaves
76	Baraira	<i>Sida acuta</i>	Malvaceae	Astringent tonic	Leaves
77	Atibala	<i>Abutilon indicum</i>	Malvaceae	Used in gout, Tuberculosis, bleeding and worms	Seeds
78	Satyanashi	<i>Argemone mexicana</i>	Papaveraceae	Antimicrobial	Whole part
79	Chakkamard	<i>Senna tora</i>	Leguminoseae	Antimalarial, Antifungal	Upper aerial parts
80	Punarnava	<i>Boerhavia diffusa</i>	Nyctaginaceae	Hepatoprotective, diuretic	Upper aerial parts
81	Pyaj	<i>Allium sepa</i>	Liliaceae	Antioxidant, Antihypertensive	Bulb
82	Jangli Pyaj	<i>Urginea indica</i>	Liliaceae	Cardiotonic	Bulb
83	Brahmi	<i>Bacopa monnieri</i>	Plantaginaceae	Nervine tonic	Leaves
84	Aparajita	<i>Clitoria ternatea</i>	Fabaceae	Antipyretic, Antidiarrheal	Aerial parts, Flower
85	Haldi	<i>Curcuma Longa</i>	Zingiberaceae	Antimicrobial	Rhizomes
86	Adrak	<i>Zingiber officinalis</i>	Zingiberaceae	Digestive, Antimicrobial	Rhizomes
87	Arand	<i>Ricinus communis</i>	Euphorbiaceae	Used in constipation	Seed Oil
88	vantulsi	<i>Ocimum gratissum</i>	Labiatae	Antihypertensive	Leaves
89	Pudina	<i>Mentha arvensis</i>	Labiatae	Stomachic, digestive	Leaves
90	Kantkari	<i>Solanum verginianum</i>	Solanaceae	Hepatoprotective	Leaves
91	Ashwagnadha	<i>Withania Somnifera</i>	Solanaceae	Immunomodulator	Leaves
92	Sarphonk	<i>Tephrosia purpurea</i>	Fabaceae	hepatoprotective	Leaves
93	Ghamra	<i>Tridax procumbens</i>	Asteraceae	Hair tonic	Upper aerial parts

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