

**Research Article**

**SOME PLANTS USED AS CARDIAC STIMULANTS, BLOOD PURIFIERS,  
PURGATIVE AND ANTISPASMODICS IN UNANI SYSTEM OF  
MEDICINE FROM JOGINDER NAGAR (H.P)**

**\*Neelam Kumar**

*Centre of Excellence in Dravyaguna and Medicinal Plants, Research Institute in Indian System of  
Medicine, Joginder Nagar, District Mandi (H.P)*

*\*Author for Correspondence*

**ABSTRACT**

Himachal Pradesh is one of the richest biodiversity states of India due to variable environmental conditions. By population explosion dependency on biodiversity has increased many folds and some species of plants are at the edge of extinction due to over exploitation and habitat destruction. The present study was carried out to assess and document the floristic diversity of Tehsil Joginder Nagar. During the course of investigations, 59 plant species of 53 genera and 36 families belonging to two different taxonomic groups i.e. angiosperms and gymnosperms were collected and preserved in the form of herbarium after drying in the folds of blotting sheets. Plants were enumerated along with their Botanical name, Family name, Local name and Unani name. A checklist has been prepared after comparing with the existing literature of Unani System of Medicine especially used for cardiac stimulant, blood purifier, purgative and antispasmodic given in Hamdard Pharmacopoeia of Eastern Medicine.

**Keywords:** *Himachal Pradesh, Unani System of Medicine, Families, Herbarium and Climatic Conditions*

**INTRODUCTION**

India is the natural botanical garden of floristic biodiversity in the world, because of variable climatic conditions. Himachal Pradesh is one of the richest biodiversity areas and hilly state of India with altitude ranging from 350 to 7000 meters. It is located in the Western Himalaya region between 30° 22' N to 33° 12' N and 75° 45' E to 79° 04' E, extends over an area of about 55,673 Sq. Km. About 13082 Sq. Km area is covered by different types of forest i.e. Tropical dry deciduous forests, tropical thorn forests, sub tropical pine forest, Sub-tropical dry ever green forest, Himalayan moist temperate forest, and sub alpine and alpine forests. Total area covered by forest is 14668 Sq. Km which constitute about 26.35% of the total geographical area of the Himachal Pradesh (Anonymous, 2009; Kumar, 2014).

Tehsil Joginder Nagar lies between 31° 50' N and 76° 45' E in Mandi district of Himachal Pradesh. There are 222 villages under this Tehsil and its total area is about 26,005 hectare. It is situated in the way of Pathankot to Mandi at National Highway No. 20. Area of Joginder Nagar lies at 900 to 2800 meters above mean sea level and its maximum areas are covered under forest. It is about 22 kilometer from Baijnath and 56 kilometer from Mandi. It is the repository of floral biodiversity due to variable climatic conditions. Such biodiversity supports the livelihood of people who live in the remote and backward area of Tehsil Joginder Nagar. These people directly or indirectly depend on biodiversity for food, fuel, fodder, timber, and medicines etc. Due to population explosion, dependency on biodiversity has increased. Certain species of plants are in the verge of disappearing from the earth due to over exploitation, habitat destruction and changes in climatic conditions. Various studies have been carried out on floristic diversity and medicinally important plants of Himachal Pradesh including Joginder Nagar [Atkinson (1882); Collett (1902); Hooker (1872-1897); Kumar, (2014)], but many biodiversity rich areas are still unexplored. So, there is a need to explore important biological resources for their conservation. Keeping in view the importance of floristic diversity, the present study was carried out to assess and document the information of the study area.

## Research Article

### MATERIALS AND METHODS

The field surveys were conducted in April 2013 to December 2013 in different areas of Tehsil Joginder Nagar. The plant specimens collected during field visits were identified and preserved in the form of herbarium after drying in the folds of blotting sheets. The herbarium was prepared after treating the collected plant specimens with 2% mercuric chloride solution to provide protection against insects and fungal attack. The collected specimens were identified with the help of the various flora and books (Sood et. al, 2009; Collett, 1902; Polunin and Stainton, 1984; Chatterjee and Pakrashi, 1991; Chauhan, 1999; Ambasta, et.al, 1986; Prajapati et. al., 2003) and carefully matched with the specimens kept at herbarium of Botanical Survey of India, Dehradun. All the plant specimens were arranged alphabetically and are enumerated along with their Botanical name, Family name, Local name and Unani name. Local name of the collected plant specimens were recorded by interview and discussion with the local people.

### RESULTS AND DISCUSSION

During the course of investigation, 59 plant species of 53 genera and 36 families belonging to two taxonomic groups i.e. angiosperms and gymnosperms were collected from the area of tehsil Joginder Nagar (Table 1). Out of these 36 families, 35 families belong to angiosperms (30 families belong to Dicotyledons and 5 belong to Monocotyledons) and 1 families belong to gymnosperms. Among these families the predominant families are Euphorbiaceae and Papilionaceae with 5 species each; Caesalpiniaceae, Combretaceae, Rosaceae and Zingiberaceae each with 3 species; Apocynaceae, Berberidaceae, Cucurbitaceae, Lamiaceae, Mimosaceae, Moraceae and Solanaceae each with 2 species and remaining 23 families having only one species each. All collected species of plant have medicinal value.

These 59 medicinal plant species were used in Unani System of Medicines, of which 34 plant species were used as antispasmodic, 15 as blood purifier, 14 as purgative and 6 as cardiac stimulant (Figure 1). *Abies webbiana*, *Adhatoda vasica*, *Aegle marmelos*, *Allium sativum*, *Butea monosperma*, *Cannabis sativa*, *Cinnamomum zeylanicum*, *Coriandrum sativum*, *Datura metel*, *Emblica officinalis*, *Euphorbia hirta*, *Euphorbia nerifolia*, *Ficus racemosa*, *Juglans regia*, *Mangifera indica*, *Mimosa pudica*, *Momordica charantia*, *Myrica nagi*, *Nicotiana tabacum*, *Papaver somniferum*, *Piper longum*, *Plantago major*, *Pongamia pinnata*, *Portulaca oleracea*, *Punica granatum*, *Rosa damascena*, *Tamarindus indica*, *Terminalia belerica*, *Thevetia nerifolia*, *Tinospora cordifolia*, *Trigonella foenum-graecum*, *Vetiveria zizoides* and *Zingiber officinale* used as antispasmodic; *Ajuga bracteosa*, *Albizzia lebbek*, *Aloe vera*, *Berberis aristata*, *Borassus flabellifer*, *Celastrus paniculatus*, *Curcuma longa*, *Dalbergia sissoo*, *Euphorbia hirta*, *Melia azedarach*, *Mimosa pudica*, *Nerium indicum*, *Psoralea corylifolia*, *Terminalia chebula*, *Tinospora cordifolia* were used as blood purifier; *Cassia fistula*, *Chenopodium album*, *Ficus carica*, *Linum usitatissimum*, *Luffa acutangula*, *Mallotus philippinensis*, *Momordica charantia*, *Prunus communis*, *Prunus domestica*, *Ricinus communis*, *Rosa damascena*, *Tamarindus indica*, *Terminalia chebula* and *Viola odorata* were used as purgative and *Amomum subulatum*, *Cinnamomum zeylanicum*, *Emblica officinalis*, *Nerium indicum*, *Ocimum americanum* and *Terminalia arjuna* were used as cardiac stimulant. Some species were also used for more than one disorder i.e. *Nerium indicum* used as cardiac stimulant and blood purifier; *Tamarindus indica* as blood purifier and purgative; *Cinnamomum zeylanicum* and *Emblica officinalis* used as cardiac stimulant and antispasmodic; *Momordica charantia*, *Rosa damascena* and *Tamarindus indica* act as purgative and antispasmodic; *Euphorbia hirta*, *Mimosa pudica* and *Tinospora cordifolia* act as blood purifier and antispasmodic (Anonymous, 1997).

The plant specimens were collected during flowering and fruiting stage to facilitate the process of identification. The plants were classified according to Bentham and Hooker (1862-1883) system of classification. Biodiversity is one of the major resources that fulfill the material needs to human beings, because people of the rural areas totally depend on biodiversity for their basic requirements i.e food, timber and medicines etc. About 70–95% populations of developing countries are using traditional medicines for their healthcare (Randhava, 2013) while as 77 % population of rural India use the firewood for cooking (NSSO, 2007-08). In India more than 43% of the total angiosperms are reported to be of medicinal importance (Rani et al., 2013). The objective of this study is to provide comprehensive information on medicinal important floral diversity and distribution of the plants in the areas of tehsil Joginder Nagar.

# Research Article

**Table 1: List of medicinal plant used in Unani Medicine for various disorders**

S.N	Families	Botanical Name	Local Name	Unani Name	Cardiac Stimulants	Blood Purifiers	Purgatives	Antispasmodics
1	Acanthaceae	<i>Adhatoda vasica</i> Nees	Bansa, Basti, Basunti,	Arusa	-	-	-	+
2	Alliaceae	<i>Allium sativum</i> Linn.	Lasun, Lasan	Lehsun	-	-	-	+
3	Anacardiaceae	<i>Mangifera indica</i> Linn.	Aam, Amb	Khasta Aam	-	-	-	+
4	Apiaceae	<i>Coriandrum sativum</i> Linn.	Dhaniya	Kashniz	-	-	-	+
5	Apocynaceae	<i>Thevetia neriifolia</i> Juss. ex Steud.	Peet-Kaner	Pila Kaner	-	-	-	+
		<i>Nerium indicum</i> Mill.	Kaner	Kaner	+	+	-	-
6	Arecaceae	<i>Borassus flabellier</i> Linn.	Tar, Tal	Tari	-	+	-	-
7	Berberidaceae	<i>Berberis aristata</i> DC.	Kashmal, Panjolu	Darhald	-	+	-	-
		<i>Berberis lycium</i> Royle	Kashmal	Zarishk	-	-	-	+
8	Caesalpiniaceae	<i>Tamarindus indica</i> Linn.	Imli	Tukhm-e-Tamar Hindi	-	-	+	+
		<i>Cassia fistula</i> Linn.	Aahali, Amaltas	Amaltas	-	-	+	-
		<i>Cannabis sativa</i> Linn.	Bhang	Bhang	-	-	-	+
9	Celastraceae	<i>Celastrus paniculatus</i> Willd.	Malkangani	Malkangni	-	+	-	-
10	Chenopodiaceae	<i>Chenopodium album</i> Linn.	Bathu	Bathuwa	-	-	+	-
11	Combretaceae	<i>Terminalia arjuna</i> (Roxb.) Wight & Arn.	Arjun	Arjun	+	-	-	-
		<i>Terminalia bellirica</i> Roxb.	Behara	Bahera	-	-	-	+
		<i>Terminalia chebula</i> Retz.	Harad	Halila	-	+	+	-
12	Cucurbitaceae	<i>Luffa acutangula</i> (Linn.) Roxb.	Kali Tori, Jhinga Tori	Jangli Turai	-	-	+	-
		<i>Momordica charantia</i> Linn.	Karela	Karela	-	-	+	+
13	Euphorbiaceae	<i>Ricinus communis</i> Linn.	Arand, Erna	Arand	-	-	+	-
		<i>Emblica officinalis</i> Gaertn.	Amla	Amla	+	-	-	+
		<i>Euphorbia hirta</i> Linn.	Dudhli, Dudhi	Dudhi	-	+	-	+
		<i>Euphorbia neriifolia</i> Linn.	Thohar	Thohar	-	-	-	+
		<i>Mallotus philippensis</i> Muell. Arg.	Kambal, Kaambal	Kamila	-	-	+	-
14	Juglandaceae	<i>Juglans regia</i> Linn.	Akhrot, Khoar	Jouz	-	-	-	+
15	Lamiaceae	<i>Ajuga bracteosa</i> Wall. ex Benth.	Nilkanthi	Nilkanthi	-	+	-	-
		<i>Ocimum americanum</i> Linn.	Kali-tulsi	Kali Tulsi	+	-	-	-
16	Lauraceae	<i>Cinnamomum zeylanicum</i> Breyn.	Darchini	Darchini	+	-	-	+
17	Liliaceae	<i>Aloe barbadensis</i> Mill.	Kawar, Ghi-Kawar	Karanjwa	-	+	-	-

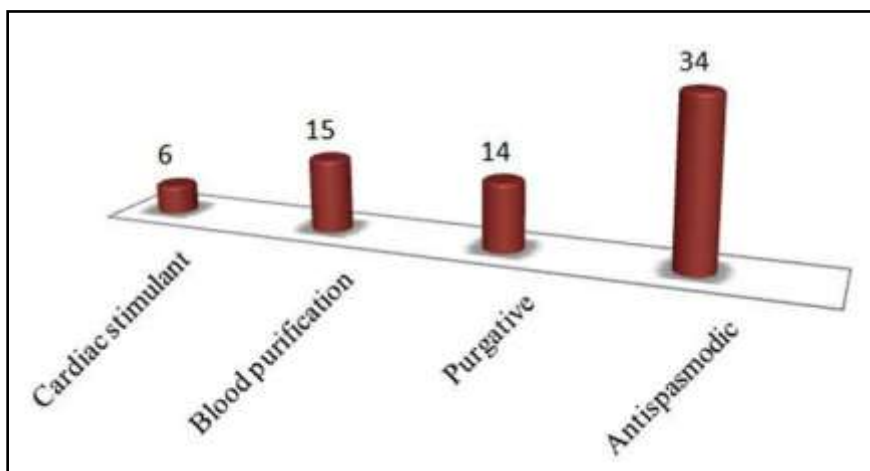
# Research Article

18	Linaceae	<i>Linum usitatissimum</i> Linn.	Alsi	Alsi	-	-	+	-
19	Meliaceae	<i>Melia azedarach</i> Linn.	Drek	Bakayen	-	+	-	-
20	Menispermaceae	<i>Tinospora cordifolia</i> (Wild.) Miers. ex Hook. f. & Thoms	Giloy, Gulja	Gilo	-	+	-	+
21	Mimosaceae	<i>Albizia lebbeck</i> Benth.	Siris	Siras	-	+	-	-
		<i>Mimosa pudica</i> Linn.	Lajwanti, Chui-mui	Chui Mui	-	+	-	+
22	Moraceae	<i>Ficus carica</i> Linn.	Anjir	Anjir	-	-	+	-
		<i>Ficus racemosa</i> Linn.	Gular, Umare	Gular	-	-	-	+
23	Myricaceae	<i>Myricaesculenta</i> Buch.-Ham.	Kaphal	Kaiphah	-	-	-	+
24	Papaveraceae	<i>Papaver somniferum</i> Linn.	Afim	Afiyun	-	-	-	+
25	Papilionaceae; Fabaceae	<i>Butea monosperma</i> (Lam.) Kuntze	Palas	Gul-e-Tesu	-	-	-	+
		<i>Dalbergia sissoo</i> Roxb.	Sheesham, Tahali	Sheesham	-	+	-	-
		<i>Pongamia pinnata</i> Pierre	Karanja	Karanj	-	-	-	+
		<i>Psoralea corylifolia</i> Linn.	Bakchi, Babachi	Babchi	-	+	-	-
		<i>Trigonella foenum-graeceum</i> Linn.	Methi	Methi	-	-	-	+
26	Pinaceae	<i>Abies pindrow</i> Royle	Talispatra	Talispatra	-	-	-	+
27	Piperaceae	<i>Piper longum</i> Linn.	Magha	Pipal	-	-	-	+
28	Plantaginaceae	<i>Plantago major</i> Linn.	Isafghol	Tukhm-e-Barhang	-	-	-	+
29	Poaceae	<i>Vetiveria ziznioides</i> (Linn.) Nash	Vetiver, Khas-Khas	Khas	-	-	-	+
30	Portulacaceae	<i>Portulaca oleracea</i> Linn.	Kulfa, Chlai	Tukhm-e-Khurfah	-	-	-	+
31	Punicaceae	<i>Punica granatum</i> Linn.	Daadu, Anar	Gulnar	-	-	-	+
32	Rosaceae	<i>Prunus communis</i> Fritsch	Badam	Khubani	-	-	+	-
		<i>Prunus domestica</i> Linn.	Aloo-bukhara	Alubokhara	-	-	+	-
		<i>Rosa damascena</i> Mill.	Gulab	Gul Surkh	-	-	+	+
33	Rutaceae	<i>Aegle marmelos</i> Correa.	Bel	Belgiri	-	-	+	+
34	Solanaceae	<i>Datura metel</i> Linn.	Kala Dhatura, Dhatura	Kala Dhatura	-	-	-	+
		<i>Nicotiana tabacum</i> Linn.	Tambaku, Tamaku	Tambacu	-	-	-	+
35	Violaceae	<i>Viola odorata</i> Linn.	Banaksha	Gul Banafsha	-	-	+	-
36	Zingiberaceae	<i>Zingiber officinale</i> Rosc.	Adrak	Sonth	-	-	-	+
		<i>Curcuma longa</i> Linn.	Haldi	Haldi	-	+	-	-
		<i>Amomum subulatum</i> Roxb.	Bari Elachi	Bari Elaichi	+	-	-	-

- Sign in table = No use for disorder.

+ Sign in table = Used for disorder.

## Research Article



**Figure 1: Number of plants used for different disorders**

## Conclusion

The present study provides information about the floral diversity of Tehsil Joginder Nagar. During the course of study, 59 plant species belonging to 36 families were recorded. People of rural areas totally depend on biodiversity for food, fuel, fodder, timber, medicines and various other purposes. Due to population explosion, urbanization, over exploitation and habitat destruction, the number of important plant species is decreasing rapidly and even some in the verge of disappearing from the earth. The selected study area shows great medicinally important floral diversity. So, there is need to explore and collect the information of floristic diversity of unexplored areas to conserve the natural biodiversity.

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**Research Article**

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