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### RESEARCH ARTICLE

## ETHNOBOTANICAL SURVEY OF MEDICINAL PLANTS AGAINST SOME COMMON DISEASES IN ALIGARH DISTRICT, U.P., INDIA.

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#### Abstract

Since the ancient time, plant species have been used as the source of phytomedicine by the human beings. Plants are the richest source of medicine due to the presence of biochemical, which are useful to cure the various diseases. The present paper provides the information on the phytoremedies practiced by the Hakim, Vaidh and Local people of interior area of Aligarh district, U.P., India. During the floristic survey for collection the ethnomedicinal informations, 61 plant species belonging to 35 Families, 57 Genera were found to be used to cure various common diseases like amoebiosis, bronchitis, cold & cough, diarrhoea, dysentery etc.

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#### Introduction:-

From ancient times, the plants have been used as sources of medicines by the tribal or human being. The traditional medical knowledge of plants and their use by indigenous cultures are not only useful for conservation of cultural traditions, but also for community health care and drug development the present and future. The present floristic study deals with various common plant species having medicinal values in Aligarh district. Various kinds of ethnomedicinal plants like herbs, shrubs, weeds, tree etc. are used in different mode of administration in curing the different diseases. Geographically, Aligarh district lies 27° 35' to 28° 11' North latitude and 77° 29' to 78° 38' East longitude. It is bounded by Gautam Budh Nagar, Bulandshahr and Badaun on the north, whereas it is spread up to Haryana in the west. Topographically, it presents a shallow like trough appearance with high Ganga and Yamuna banks of extreme rim. River Yamuna flows on the north-west region of the district and Ganga separates the district from Badaun of the north-east end. All over the world, everybody is familiar to Aligarh district of U.P. due to presence of Aligarh Muslim University.

#### Material and Methods:-

Field trips were organized for collecting the ethnobotanical information of plants by using the interviews and questionnaires with practitioners and experienced men. While noting the information in the record file at the time of survey, every care is taken to record the local name, flowering & fruiting time of plants and their parts and diseases name. The parts of the different plant species are different for the treatment of various common diseases. Plant species are identified by using relevant flora (Duthie, 1903-1929). The ethnomedicinal uses of the plants are compared with available Scientific Literatures (Katewa et al. 2001), (Kumar and Chauhan, 2005), (Murthy et al. 2013), (Pandey and Kumar, 2006), (Rahul, 2013), (Rani et al. 2009), (Sinhbabu and Banerjee, 2013), (Sharma et al. 2010), (Yumnamcha et al. 2014).

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**Results:-**

While exploring the plants of Aligarh district during research from floristic and ethnobotanical point of view, author came across some ethnobotanical plant species, which were used to cure various common diseases. 61 ethnomedicinal plant species belonging to 35 families and 57 genera were enumerated in the present work. 26 plant species and 31 plant species were used for single drug treatments and multidrug treatment respectively. Data of medicinal plants clearly describes plant nature, local name, occurrence, flowering and fruiting time, plant part used and disease name in **Table**. Leaf constitute was the highest (19) of utilization followed by stem & its parts (bark 12, rhizome 2, twig gum 1, stem 2), root (9), fruit (7), seed (7), whole plant (7), flower (5) and bulb (2).

**Table :-** List of Some Ethnomedicinal Plants of Aligarh district.

S. no.	Nature	Botanical name	Family	Local name	Occurrence	Fls/Frts Time	Parts used	Disease
1.	Shrub	<i>Abrus precatorius</i> L.	Fabaceae	Ratti	Waste place and Road side	Aug-Sep/ Sep-oct	Leaf	Bronchitis, Cold & Cough.
							Root	Cold & Cough.
2.	Shrub	<i>Abutilon indicum</i> L.	Malvaceae	Kanghi	Waste place Road side	Aug-Jan/ Jan-Mar	Leaf	Dysentery.
							Root	Amoebiosis.
3.	Tree	<i>Acacia catechu</i> L.	Mimosaceae	Khairi	Road side	Jul-Aug/ Sep-Mar	Bark	Bronchitis.
4.	Tree	<i>Acacia nilotica</i> L.	Mimosaceae	Babul	Road side	Jul-Oct/ Nov-Feb	Bark	Cold, Whooping cough.
							Twig Gum	Dysentery.
5.	Herb	<i>Achyranthes aspera</i> L.	Amaranthaceae	Chirchitta	Semi dry place, Road side	Through out of year	Bark	Blood dysentery,
							Seed	Cold & Cough.
6.	Shrub	<i>Adhatoda vasica</i> Nees.	Acanthaceae	Piyabans	Garden	Oct-Jan/ Jan-Mar	Leaf	Bronchitis.
							Flower	Bronchitis.
7.	Tree	<i>Aegle marmelos</i> L.	Rutaceae	Bel	Road side	Apr-May/ May-July	Fruit	Diarrhoea, Dysentery.
8.	Tree	<i>Ailanthus excelsa</i> Roxb.	Simaroubaceae	Ulloo	Planted in garden & road side	Feb-Apr/ Apr-June	Bark	Amoebiosis.
							Gum	Diarrhoea, Dysentery.
9.	Herb	<i>Allium cepa</i> L.	Liliaceae	Piyaj	Cultivated Field	–	Bulb	Cold & Cough.
10.	Herb	<i>Allium sativum</i> L.	Liliaceae	Lahsun	Cultivated Field	–	Bulb	Cold & Cough.
11.	Herb	<i>Aloe vera</i> Tourn.	Liliaceae	Ghinkwar	Side of fruit orchards	End winter	Leaf	Cold & Cough.
12.	Tree	<i>Alstonia scholaris</i> L.	Apocynaceae	Chitwan	Road side	Jan-Mar/ May-Jul	Bark	Diarrhoea, Dysentery.
13.	Herb	<i>Amaranthus spinosus</i> L.	Amaranthaceae	Kanta chouli	Waste place	Aug-Jan	Root	Amoebiosis.
14.	Herb	<i>Argemone</i>	Papaveraceae	Satyanasi	Waste and	Oct-	Whole	Whooping

		<i>mexicana</i> L.			Dry place	Apr/ Apr- May		cough.
15.	Tree	<i>Artocarpus integrifolia</i> L.	Moraceae	Katahal	Cultivated field	–	Fruit	Diarrhoea, Dysentery.
16.	Herb	<i>Bacopa monnieri</i> L.	Scrophuliaceae	Vermin	Moist place	Aug- Oct/ Oct- Nov	Whole	Bronchitis.
17.	Tree	<i>Bauhinia purpurea</i> L.	Caesalpinoidae	Kachnar	Planted in garden & roadsides	Nov- Fab/ Mar- Apr	Bark Root	Diarrhoea. Cold & Cough.
18.	Tree	<i>Butea monosperma</i> Lam.	Fabaceae	Dhak	Rare but road side	Mar- May	Gum	Dysentery.
19.	Under shrub	<i>Carissa spinarum</i> L.	Apocynaceae	Karaunda	Side of fruit orchards	Nov- Dec/ Dec- Feb	Leaf	Whooping cough.
20.	Herb	<i>Centella asiatica</i> L.	Apiaceae	Brahmi	Moist place	Feb- Apr/ Apr- May	Whole	Diarrhoea, Dysentery.
21.	Herb	<i>Corchorus capsularis</i> L.	Tiliaceae	Kharenti	Cultivated field	Aug- Oct	Leaf	Dysentery.
22.	Under shrub	<i>Coriandrum sativum</i> L.	Apiaceae	Dhania	Cultivated field	Jan-Mar	Seed	Amoebiosis, Diarrhoea, Dysentery.
23.	Herb	<i>Curcuma longa</i> L,	Zingiberaceae	Haldi	Cultivated field	Sep-Oct	Rhizome	Cold & Cough, Dysentery.
24.	Herb	<i>Cynodon dactylon</i> (L.) Pers.	Poaceae	Doob ghash	Waste field	Most parts of year	Whole	Diarrhoea, Dysentery.
25.	Herb	<i>Cyperus rotundus</i> L.	Cyperaceae	Motha	Moist place	Jul - Dec	Root	Dysentery.
26.	Herb	<i>Datura metel</i> L.	Solanaceae	Dhatura	Road side	Dec- Feb	Leaf	Amoebiosis, Diarrhoea.
27.	Herb	<i>Eclipta prostrata</i> L.	Asteraceae	Kala Bhangra	Moist place	Most part of year	Leaf	Bronchitis, Cough, Dysentery.
28.	Tree	<i>Eucalyptus glabulus</i> Labill.	Myrtaceae	Safeda	Side of orchards & road	Apr-Jun	Leaf	Bronchitis.
29.	Herb	<i>Euphorbia prostrata</i> Sims.	Euphorbiaceae	Gonemchi	Waste place	Most part of year	Whole	Diarrhoea.
30.	Herb	<i>Evolvulus alsinoides</i> L.	Convolvulaceae	Vishnukranta	Road side, in village	Aug- Oct/ Oct- Nov	Leaf	Bronchitis, Cold & Cough.
31.	Tree	<i>Ficus benghalensis</i> L.	Moraceae	Bargad	Road side, in villages	Mar-Jun	Bark	Diarrhoea, Dysentery.

32.	Tree	<i>Ficus racemosa</i> L.	Moraceae	Gular	Road side, in villages	Mar-Jun	Bark	Diarrhoea, Dysentery.
33.	Tree	<i>Ficus religiosa</i> L.	Moraceae	Pipal	Road side, in villages	Mar-May	Bark	Diarrhoea, Whooping cough.
34.	Herb	<i>Leucas cephalotes</i> Roth.	Lamiaceae	Goma		Oct-Nov/ Nov-Dec	Flower	Cold & Cough.
35.	Herb	<i>Linum usitatissimum</i> L.	Linaceae	Alsi	Cultivated field	Jan-Feb/ Feb-Mar	Seed	Cold & Cough.
36.	Tree	<i>Mangifera indica</i> L.	Anacardiaceae	Aam	Cultivated in orchards	Feb-Apr/ May-Jul	Bark	Bleeding dysentery.
37.	Herb	<i>Mentha longifolia</i> L.	Lamiaceae	Podina	Moist place	Oct-Nov/ Nov-Dec	Leaf	Diarrhoea, Dysentery.
38.	Herb	<i>Mimusops elengi</i> L.	Sapotaceae	Maulsari		Apr-May/ May-Jun	Fruit	Dysentery,
39.	Herb	<i>Momordica charantia</i> L.	Cucurbitaceae	Karela	Cultivated in orchards	Jul-Sep/ Sep-Oct	Leaf	Diarrhoea, Dysentery.
40.	Herb	<i>Musa paradisiaca</i> L.	Musaceae	Kela	Side of orchards	–	Fruit	Diarrhoea, Dysentery.
							Rachis	Dysentery.
41.	Herb	<i>Ocimum basilicum</i> L.	Lamiaceae	Vantulsi	Waste place	Nov-Dec/ Dec-Jan	Leaf	Dysentery, Whooping cough.
							Flower	Cold & Cough.
42.	Herb	<i>Oxalis corniculata</i> L.	Oxalidaceae	Khathi mithi	Moist place & in garden	Dec-Feb/ Feb-Apr	Whole	Diarrhoea, Dysentery.
43.	Tree	<i>Pongamia pinnata</i> (L.) Pierra.	Fabaceae	Papri	Road side, rare in garden	Mar-May/ May-Jun	Seed	Whooping cough.
44.	Tree	<i>Psidium guajava</i> L.	Myrtaceae	Amroud	Cultivated in orchards	May-Jul	Stem	Amoebiosis.
							Fruit	Diarrhoea, Dysentery.
45.	Under-shrub	<i>Rauvolfia serpentina</i> (L.) Benth.	Apocynaceae	Chotachand	Rare, in shady place	Mar-Apr/ Apr-May	Root	Diarrhoea.
46.	Herb	<i>Rungia repens</i> (L.) Nees.	Acanthaceae	Manga	Moist, shady place	Oct- Jan	Whole	Cough.
47.	Grasses	<i>Saccharum officinalis</i> L.	Poaceae	Ganna	Cultivation in field	----	Stem	Constipation, Diarrhoea.
48.	Tree	<i>Salvadora persica</i> L.	Salvadoraceae	Pilu	Garden, road side	Nov-Feb/	Leaf	Cough, Bronchitis.

						Feb-Mar		
49.	Under shrub	<i>Sida cordifolia</i> L.	Malvaceae	khirainti	Dry place, & road side	Sep-Dec	Leaf	Dysentery.
50.	Herb	<i>Sisymbrium irio</i> L.	Brassicaceae	Khumbkalan	Moist field, road side	Mar-Apr	Seed	Diarrhoea.
51.	Herb	<i>Solanum xanthocarpum</i> Schrad.	Solanaceae	Kateri	Dry and waste place	May-Aug/ Aug-Sep	Flower	Whooping cough.
							Fruit	Cold & Cough.
							Root	Cold & Cough.
52.	Tree	<i>Syzygium cumini</i>	Myrtaceae	Jamun	Side of orchards	Apr-Jun/ Jun-Jul	Leaf	Diarrhoea.
							Bark	Diabetes, Dysentery.
53.	Tree	<i>Tamarindus indica</i> L.	Caesalpinaceae	Imli	Road side and in villages	Jul-Sep/ Sep-Nov	Leaf	Dysentery.
							Flower	Blood dysentery.
							Seed	Cold & Cough.
54.	Tree	<i>Terminalia arjuna</i> Roxb.	Combretaceae	Arjun	Road side	May-Jun/ Jul-Aug	Bark	Bronchitis.
55.	Herb	<i>Tribulus terrestris</i> L.	Zygophyllaceae	Gokhru	Dry and waste place	Jul-Sep/ Sep-Nov	Fruit	Bronchitis.
56.	Herb	<i>Trigonella foenum-graecum</i> L.	Fabaceae	Methi	Cultivation in field	Jan-Feb/ Feb-Mar	Seed	Dysentery.
57.	Under shrub	<i>Triumfetta rhomboidea</i> Jacq.	Tiliaceae	Kasni	Waste place	Aug-Sep/ Sep-Oct	Root	Bronchitis.
58.	Herb	<i>Vernonia cinerea</i> L.	Asteraceae	Phulni	Road side	Sep-Feb/ Feb-Mar	Root	Cold & Cough, Diarrhoea.
59.	Herb	<i>Vinca rosea</i> L.	Apocynaceae	Sadawahar	Cultivation in field	Most part of year	Leaf	Blood dysentery.
60.	Herb	<i>Zingiber officinale</i> L.	Zingiberaceae	Adarak	Cultivation in field	—	Rhizome	Cold & Cough.
61.	Shrub	<i>Zyzyphus nummularia</i> Burn f.	Rhamnaceae	Jhar Ber	Side of railway lines	Jul-Sep/ Sep-Dec	Leaf	Cold & Cough.

### Discussions:-

The present paper provides the traditional and medicinal uses of plant species. These plant species have been used by practitioners and local experience people in the anterior area of Aligarh district. Most of the plant species are herbaceous nature. These plant species are used as phytoremedies to cure the various common diseases like

amoebiosis, bronchitis, Cold & Cough, diarrhoea, dysentery etc. Different plant parts such as bark, flower, fruit, leaf, roots, seeds, stem etc. are used for the treatment of diseases.

### Conclusion:-

The present study is very helpful to list out various ethnomedicinal plants of Aligarh district. The paper provided here can be utilized to further studies on conservation and cultivation of ethnomedicinal plants, because most of the plant species are on the way of extinct due to pollution. The youth should also be encouraged to learn the traditional medicinal knowledge to preserve it from being lost with the older generation. The present paper briefly provides the ethnomedicinal information's related to 61 medicinal plant species.

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