



## EXPLORATION OF ANTI-CANCEROUS MEDICINAL PLANTS OF NASIK DISTRICT, MAHARASHTRA, INDIA.

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### ABSTRACT:

The present study was undertaken in the remote area of Nasik District of Maharashtra, India for exploration of anti-cancerous plants. Near about 32 plant species were studied which are used for cancer treatment. Due to change in life style and hazardous pesticides are used for increase in the yield of crop, peoples are suffering from malignant growth of Cancer cells. Globally cancer is a disease which severely effects the human population. There is a constant demand for new therapies to treat and prevent of this life threatening disease. Various plants like Acorous, *Andrographis*, *Curcuma* can be used for the treatment of cancer since of human history and on the basis of modern medicine. The use of leaves, tubers rhizomes, bulbils, fruits, Seeds, flowers etc. are used to cure cancer treatment. Anti-cancerous molecules are identified & isolated from plants for treatment. The tribal are used extract of various plant part for anti-cancerous activity. The plants can produces naturally occurring secondary metabolites which are being investigated for their anti-cancerous activities leading to the development of new clinical drugs.

**Key words:** - Nasik District, Cancer, Anticancerous plants, Tribal.

### INTRODUCTION:

Nashik district is located in the North west side of the Maharashtra state. It lies between latitude 19°, 35' & 20°50' and longitude 73°,30' & 74°,55'. It situated on the Westerns Ghats of Sahyadri ranges. Evergreen and dry deciduous type forest present in study area.

The plants are an important source of various crude drugs; these plants are used by tribal peoples in their day to day due to their enormous potential. Plants have been used in medicine for their natural antiseptic properties. Many plants species are being used for treatment or to prevent cancer.

From the period of Rugveda, Athraveda, Samveda, Yajurveda herbal medicines have been used & are still used in developing countries as the primary source of medical treatment.

The remote area peoples have tremendous knowledge about medicinal properties & uses of plants. the modern medicinal therapy is costly as

compare to traditional folk medicine, it is safe and easily available for them.

### MATERIALS AND METHODS

The ethno medicinal surveys was carried out in the remote area of Nasik district like peth, Hursul, Igatpuri, Surgana with the help of tribal, near about 2-3 years in all seasons. Plants specimens were collected, identified with the help of floras (T.Cooke 1958), Lakshmi narsimhan & Sharma 1991) preserved in the form of herbarium. Information about traditional medicines were collected from the tribal peoples for cancer treatment such as local name, plant part used, doses etc.

Geography and Climate:

Temp. – 5.5° C-25°C in winter season.  
24°C-46°C in summer season

Humidity – 90-95 % in Monsoon season  
20-25% in summer season

**RESULT & DISCUSSION:**

The remote pockets of Nasik district have a wide range of different plants. About 32 indigenous medicinal plants belonging to 24 families have been documented for cancer treatment as shown in table. The data analyses that the tribal peoples of remote area of Nasik district are used leaves, flowers, fruits, roots, rhizome as an anti-cancerous plants to cure cancer.

The local vaidya's are used herbal extract. The tribal peoples undergo such type of folk medicine. It was traditional knowledge about plants that were used to cure cancer and various diseases.

**CONCLUSIONS:**

Cancer is the most common disease, the allopathic treatment can cause adverse effect which is costly thus herbal medicines are used to cure cancer and to maintain and stop the malignant growth of cancer cells. The above study conclude that the traditional medicine is a set of practices handed over from one generation to another generation. The survey indicated that the study area has many of medicinal plants to treat various ailments.

The thorough investigation may use for various pharmaceutical industries for preparation of proper medicine cancer treatment.

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**Observation Table :**

32 plant species were collected, identified for cancer treatment (Sharma 1986, . patil 2001 Liu et,al 2011,Subrata 2012)

Sr. no.	Name of the plant	Family	Local name	Parts use	Doses
1.	<i>Acorus calamus</i> Linn.	Acoraceae	Vekhand	Root & Rhizomes	Root and Rhizomes extract is given twice in day
2	<i>Aegle marmelos</i> Linn.	Rutaceae	Bel	Leaves	Leaves extract is given
3	<i>Aloe vera (L.)</i> Burm.f.	Asphodelaceae	Korphad	Leaves	Gel of leaf extract
4	<i>Alpinia galanga (L.)</i> Willd.	Zingiberaceae	Blue ginger	Rhizome	one cup Extract of rhizomes in early in the morning
5	<i>Amooara rohituka</i> Roxb.	Meliaceae	Rohitak	Stem, bark	Extract of stem bark in early in the morning
6	<i>Androgrphis paniculata (Burm.f.)</i> Nees	Acanthaceae	Green Chirayata	Leaves	Extract of leaves is given early in the morning
7	<i>Asparqagus racemosus</i> Willd.	Asperagaceae	Shatavari	Rhizomes	Extract of rhizomes
8	<i>Azadirachta indica</i> A.Juss.	Meliaceae	Neem	Leaves	One cup of leaf extract is given early in morning



9	<i>Bauhinia variegata</i> (L.) Benth.	Fabaceae	Kanchan	Leaves	Leaf extract are early in the morning
10	<i>Bryophyllum pinnatum</i> (Lam.) Oken	Crassulaceae	Pan-phuti	Leaves	one cup leaves extract early in the morning
11	<i>Catharanthus roseus</i> (L.) G.Don	Apocynaceae	Sadhaphuli	Leaves	Leaf extract is given twice in a day
12	<i>Curcuma longa</i> Linn.	Zingiberaceae	Turmeric	Rhizome	one cup Extract of rhizome early in the morning
13	<i>Emblica officinalis</i> Linn.	Phyllanthaceae	Amla	Fruit	one cup Fruit juice early in the morning
14	<i>Glycine max</i> (L.) Merr.	Fabaceae	Soyabean	Seed	Boiled seed extract are use
15	<i>Glycyrrhiza glabra</i> Linn.	Fabaceae	Jeshthamadh	Rhizome	Extract is given twice in a day
16	<i>Gossypium hirsutum</i> Linn.	Malvaceae	Cotton	Seed	seed extract are used twice in a day
17	<i>Gymnosporia Montana</i> Roth. Benth.	Celastraceae	Henkal	Whole plant & Leaves	Extract of leaves, stem, root given early in the morning
18	<i>Morinda citrifolia</i> Linn.	Rubiaceae	Bartondi	Leaves	One cup of leaf Extract given early in the morning
19	<i>Nigella sativa</i> Linn.	Ranunculaceae	Kalonji	Seed	Powder of seed is given with warm water
20	<i>Ocimum sanctum</i> Linn.	Lamiaceae	Tulsi	Leaves, stem , root	Extract one cup early in the morning
21	<i>Oldenlandia diffusa</i> Linn.	Rubiaceae	Snake needle grass	Leaves	One tablespoon extract of leaves given early in the morning
22	<i>Piper longum</i> Linn.	Piperaceae	Pimpli	Fruit , leaf	One cup extract early in the morning
23	<i>Psoralea corylifolia</i> Linn.	Fabaceae	Bawchi	Seed ,fruit	One teaspoon Dried powder along with warm water given early in the morning
24	<i>Rubina cordifolia</i> Linn.	Rubiaceae	Manjistha	Root	one cup Boiled extract of root given before tea
25	<i>Saussurea lappa</i> Linn	Asteraceae	Kustha	Root	one cup Boiled extract of root given before tea
26	<i>Solanum nigrum</i> Linn.	Solanaceae	Kamchi	Leaves	one cup Boiled extract of leaf given before tea
27	<i>Solanum surattense</i> Linn.	Solanaceae	kateringani	Fruit	one teaspoon Extract of fruit early in the morning
28	<i>Terminalia chenbula</i> Retz.	Combretaceae	Hirida	Seed , fruit, leaf	One teaspoon of Seed power or extract given before tea
29	<i>Tinospora cordifolia</i> (Thunb.) Miers	Menispermaceae	Gulvel	Leaves & stem	one cup Boiled extract of leaf and stem given before tea.
30	<i>Withania somanifera</i> (L.) Dunal	Solanaceae	Ashwgandha	Root & Leaves	one cup Extract of root and leaf given early in the morning
31	<i>Zingiber officinale</i> Rosc.	Zingiberaceae	Ginger	rhizome	one teaspoon Extract of rhizome is given early in the morning
32	<i>Ziziphus nummularia</i> (Burm.f.)Wight.	Rhamnaceae	Bor	Leaves, bark	Extract and powder of given before early in the morning