

## Herbal medicine used to treat primary infertility in women by traditional practitioners of Vijayapur (Bijapur) district of Karnataka, India

Arati Laddimath, Srinath Rao\*

Plant tissue culture and genetic Engineering Laboratory,  
Department of post Graduate studies and Research in Botany,  
Gulbarga University, Kalaburagi 585106, Karnataka, India.

\*Corresponding author e-mail: [srinathraomm@gmail.com](mailto:srinathraomm@gmail.com)

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### ABSTRACT

An ethno-botanical survey of Vijayapur district comprising five tehsils was conducted during February 2014 to December 2015. The main purpose of this survey was to document the traditional use of medicinal plants for primary infertility in women in vijayapur district. 13 species belonging to 13 genera and 12 families were found to be used to treat primary infertility. The scientific name, family, local name, habit along with part used and mode of their administration are provided.

### 1. INTRODUCTION

India is a major centre of origin and diversity of medicinal plants. Traditional knowledge of herbal remedy to treat human diseases is fast declining in many parts of the world, including India. In India, about 2500 species belonging to more than 1000 genera and about 158 families are used in indigenous system of medicine(Tewari,1999).Traditional practitioners have their own traditional knowledge to treat primary infertility. "Primary infertility refers to who have not become pregnant after at least 1 year having sex without using birth control methods". Due to restless work, stress, strain and late marriage and chemical constituent food a lot of women facing problem of primary infertility. Most of the women do not approach doctors due to costly medicine, and different instrumental treatments like Laparoscopy test, Enzyme test, X-ray test, etc. Herbal medicines are cheap and easily available. The present study was initiated with an aim to identify medicinal plants resources from traditional practitioners of Vijayapur district to treat primary infertility

### 2. STUDY AREA

The Vijayapur district of Karnataka state is located between north latitude 16°.01', 17°.45', and east longitude 75°.03', 76°.29'. The district has its border with Belgaum, Bagalkot, Raichur, Gulbarga district and to north, Sholapur district of Maharashtra state.

Vijyapur district is plain Deccan plateau, which is from 365-610 met height above sea level. This region is slope towards west to east. The river Doni , Krishna, Bheema, and their tributaries are flows according to the slope.

The total area of Vijayapur district is 10,541 sq kms. There are five talukas of Vijayapur district i,e., Vijayapur, Muddebihaal, Sindagi, Basavanbagevaadi and Indi. Bordered by the Bheema River in the north and the River Krishna in the south.

The district consists of the dry and arid tract of the Deccan Plateau. The temperature varies between 42°C during summer and 15°C during winter season respectively. In May mean maximum temperature is 40°C. The climate of this region is arid, tropical and steppe type.

The soil of Vijayapur district area is rich in content of basalt rock, magnetite, magnesium, aluminium and iron oxide.

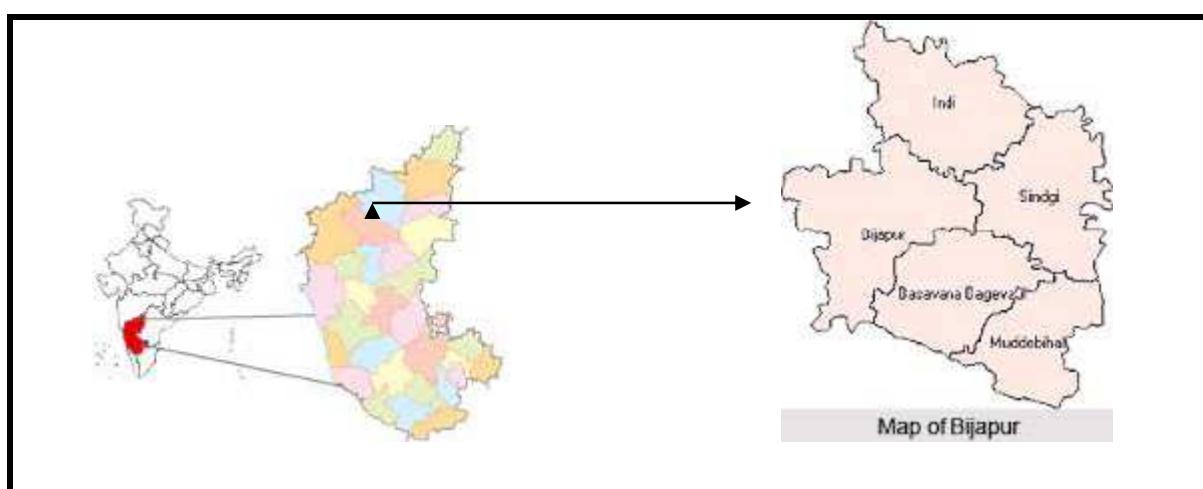
The Vijayapur district receives normal rainfall 578.0 mm and the vegetation of this region is mainly dry and deciduous and broadly as vegetation on plains. The natural vegetation near Alamatti Dam area is like dry and hot having rich flora. Many local traditional practitioners collect the plants from this area to cure the diseases

### 3. MATERIAL AND METHODS

Ethno botanical survey during February 2014 to December 2015 carried out in Vijayapur district. For this, frequent field trips were made to 15 selected villages belonging to all 5 tehsils of the districts. 17 herbal healers (16 male and 1 women) of age group 48 to 84 years, herbal healers were interviewed, data and information recorded in the standard questionnaire. Collected data and information include, Vernacular name of traditionally used medicinal plants, part used, method of preparation and dosage. Medicinal plant species were photographed in the field. Plant specimens were identified consulting with experts, by referring Flora of Gulbarga District (Seetharam *et.al.*, 2000), Three volumes of the Flora of presidency of Madras (Gamble, 1957). The voucher specimens were stored at the herbarium centre, Department of Post graduate studies and Research in Botany, Gulbarga University, Kalaburagi.

### 4. RESULT AND DISCUSSION

In the present account, 13 species of angiosperms belonging to 13 genera and 12 families are reported (Table 1). The predominant family is solanaceae with 2 species. Herbal preparation for primary infertility was in the form of decoction, juices, pastes etc. Other substances like honey, cow milk, safflower oil and cow ghee are also used in various preparation. All plant species are arranged in alphabetic order, for each species scientific name, Family, vernacular name, habit, part used and mode administrated are provided. Different plant parts were used to treat primary infertility among these leaves (28.5%), root (28.5%), fruit (7.14%), flower bud (7.14%), bark (7.14%), and whole plant (7.14%), in descending order. Most of the work has been done on medicinal plants of various districts of Karnataka state but no information is available on plants used for primary infertility in Vijayapur district. Review of related literature reveals that medicinal plants used by the traditional practitioners of this area are not recommended on other areas for same purpose (Trirathi *et.al.*, 2010), (Rajash *et.al.* 2008). However these plants were used for other human ailments. For instance leaves of *Tribulus terrestris L.* Used for expel stones (Ghatapanadi *et.al.*, 2010). Leaves of *Tridax procumbence* used for haemorrhage, Leaves of *Albizia lebbeck* used for snake bite and Leaves of *Eagle mermolus L.* used to expel kidney stones in Andra Pradesh (Madhu and Ravindra Naik, 2009). Leaves and twigs of *Caesalpinia bonducuella* are traditionally used for the treatment of tumors, inflammation and liver disorder, toothache, elephantiasis and smallpox. (Khan *et.al.*, 2012).



**Fig.1:** Map of the study area

**Table 1:** Medicinal plants used to treat primary infertility in women by traditional practitioners of Vijayapur (Bijapur) district

Plant name	Family	Local/Vern Name	Habit	Part used	Mode of administration
<i>Aegle marmelos</i> (L.).	Rutaceae	Bilva patre	Tree	Fruit	Endocarp of the fruit, make it into tablet and administered to eat at morning with empty stomach for two month
<i>Albizia lebbeck</i> (L.) Willd.	Mimoceae	Gulmoher	Tree	Bark & leaves	200 gm bark and 100 gm of young leaves are ground and boiled in 1000 ml of water till it becomes 500 ml. Filtrate decoction is given with honey for 25 days with empty stomach at morning
<i>Amaranthus gangeticus</i> L.	Amaranthaceae	kirasaalige	Herb	Root	Root is rubbed with rice soup and administered to drink morning during the menstrual cycle
<i>Argemone maxicana</i> L.	Papaveraceae	Golagolike	Herb	Whole plant	Collect whole plant at morning. ground and administered to drink five gm, after four days of Menses
<i>Barleria prionitis</i> L.	Acathaceae	Mulajaji	Herb	Root	Root is rubbed with cow ghee and administered to eat during the menstrual cycle
<i>Caesalpinia bunducella</i> Roxb	Caesalpiniaceae	Gajaga	Tree	Leaves	50 gm of leaves ground and administered to drink with 10 gm sesame oil once in a day for 7 days from the first day of Menses
<i>Cucumis prophetarum</i>	Cucurbitaceae	Mullu mekkekayi	Climber	Fruit	The fruit is cut into half equal part, rubbed with goat milk. The fluid is applied to vagina as ointment.
<i>Hibiscus rosa-sinensis</i> L.	Malvaceae	Daasavaal	shrub	Root	Root is rubbed with milk of white cow, administered to take during the menstrual cycle
<i>Musa paradisiaca</i> L.	Musaceae	Baale gida	Shrub	flower buds	50 to 60 gm flower buds ground. 20 ml of sesame oil mixed with juice and administered to drink seven days
<i>Solanum melongena</i> L.	solanaceae	Baal badane	Herb	fruit	Unripe fruit rolled in powdered sugar and which is kept in vulva up to 4-5 hours at night

<i>Tribulus terrestris</i> L.	Zygophyllaceae	Neggina mullu	Creeper	leaves	100 gm of Leaves ground with 100 ml of water and filtered. The filtrate is administered to drink at morning for 10-15 days
<i>Tridax procumbens</i> L.	Compositeae	Tikki kasa	Herb	leaves	100 gm of Leaves ground with 100 ml of water and filtered. The filtrate juice is administered to drink at morning for 15-20 days
<i>Withania somnifera</i> (L.)Dunal.	solanaceae	Ashwa gandha	shrub	Root	Roots are powdered, administered to drink one spoonful powder with buffalo milk for seven days from first day of menses with empty stomach.
<i>Ziziphus jujuba</i> Lam.,non Mill.	Rhamnaceae	Baarikaayi	Shrub	Leaves	10 gms of young leaves ground, taken with 10 ml of curd.

*Aegle marmelos**Argemone maxicana**Caesalpinia bunduc**Cucumis prophetarum**Musa paradisiaca**Solanum melongena**Tribulus terrestris**Tridax procumbens**Ziziphus mauritiana*

Review of related literature also reveals that medicinal plants used by the traditional practitioners of this area are also recommended on other areas for same purpose (Vasundhara and Bhupati 2007). In Karnataka ethno-botanical studies on medicinal plants were conducted in Chikmagalur (Gopakumar *et al* 1991), Tumkur (Yoganarasimhan *et al* 1991), Kodagu (Kalyana Sundaram Indira (1998), Uttar Kannada (Harsha *et al* 2003), Bidar (Prashantkumar and Vidyasagar 2008), Chitradurga (Hiremath and Taranath. 2010), Shimoga (Rajkumar and Shivanna 2010), Gulbarga (Ghatapanadi 2012) and Bellary (Vidyasagar and murthy siddalinga. 2012) districts. However ethno botanical study on medicinal plants in Vijayapur(Bijapur) district has not been reported. Among the plants reported *Caesalpinia bunducella Roxb* and *Withania somnifera* (L.)Dunal. Were the most effective medicinal plants to treat primary infertility in women as prescribed by 12 herbal healers (70%). Most of the women dependent on traditional herbal medicine because availability of effective drug plants. Hence, these plants can be taken up for further pharmacological and clinical studies.

## 5. CONCLUSIONS

India is a major centre of origin and diversity of medicinal plants. Traditional knowledge of herbal remedy to treat human diseases is fast declining in many parts of the world, including India. In India, about 2500 species belonging to more than 1000 genera and about 158 families are used in indigenous system of medicine.

An ethno-botanical survey of Vijayapur district comprising five tehsils was conducted during February 2014 to December 2015. The main purpose of this survey was to document the traditional use of medicinal plants for primary infertility in women in vijayapur district. 13 species belonging to 13 genera and 12 families were found to be used to treat primary infertility. The scientific name, family, local name, habit along with part used and mode of their administration are provided.

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