



## ETHNOBOTANICAL SURVEY OF PLANTS USED FOR RESPIRATORY DISEASES

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### Abstract

India is called “Botanical Garden of the World” as it is having the highest number of medicinal herbs. Out of more than 25000 plants, only 10% of the plants are used for their medicinal values. Ayurvedic is one of the most ancient systems of medicines in the world. Ayurvedic medicines are considered to be the best systems of treatment in India and this system is spreading now globally. Natural products are also a part of our everyday life. Right from the inception, India has a rich heritage of usage of Ayurvedic and Herbal medicines supported by nutraceuticals. Respiratory diseases are the term used for diseases found related to the respiratory system due to air contamination, i.e., Cough, Cold, Expectorant, Asthma etc., In order to get information regarding the treatment, a survey was made with village people suffering from respiratory infections and cured by using herbal Medicine.

**Key Words:** Ayurvedic medicines; Medicinal herbs; Respiratory diseases.

### Introduction

In India, the native people have exploited a variety of herbal medicines for effective curing of various diseases. The plants used, preparation and administration of drugs varies from area to area. Although the knowledge of herbal medicine is gradually vanishing, some of the traditional healers and aged tribal men are still practicing this art of healing with medicinal plants. Ayurveda, the Science of Life, one of the oldest treatment system which dates back to the days of Caraka Samhita and Sushruta Samhita (1,200 AD). The body and mind should remain healthy and there should be equilibrium between these two is the main theme of Ayurveda. Drug-plants and drug-yielding plants have been acknowledged throughout the centuries for creating healthy world. Modernization has exposed the human race to increased risk of bronchitis, asthma, lung cancer, and various skin diseases. Global Warming and Green House Effect are the major problems of modern world, that have threatened the very existence of life on this planet. The faster pace of life and the need for rapid cure led to the proliferation of synthetic drugs. However, the use of synthetic drugs came the problems of side effects, ill effects, and complications. This has led to the revival of herbal treatments for a large number of diseases. Since,

the world population is growing at an alarming rate, it will be the great demand for medicines. To cope up with the increasing demands of medicines, steps are being taken to populate important and popularise economic plants to meet ever-increasing demands of human populations.

Plants are vital for existence of life on earth. The plants around the habitats of the rural population not only provide food for living organisms, but also produce different chemicals necessary for human health. It is not possible to provide modern health care to all the people at affordable cost. In this juncture, folklore plays a vital role in the primary health care of rural people. They depend on natural flora to meet their healthy life. Our country has a vast emporium of ethnobotanical and folklore wealth. It is estimated that around 2,000,000 plant species are known to all over the world. The World Health Organisation (WHO) has listed 21,000 plant species of medicinal use in the world. In India, about 2,500 plant species are used for medicinal purpose by traditional healers (Chendel et al., 1996; Sankar Ganesh et al., 2007). Respiratory disease is the term used for diseases related to respiratory systems. These include diseases of the lung, pleural cavity, bronchial tubes, trachea, upper respiratory tract and of the nerves and

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muscles to breath. Respiratory diseases range from mild and self – limiting such as the common cold to life-threatening such as bacterial pneumonia or pulmonary

embolism. They are common and important cause of illness and death.

## Results and Discussion

SPECIES	FAMILY	TAMIL NAME	PART OF PLANT USED	PREPARATION
<i>Acalypha indica</i> L.	Euphorbiaceae	Kuppaimani	Leaves	Decoction, 50 ml taken per day, for 1 week by mouth.
<i>Achyranthes aspera</i> L.	Amaranthaceae	Naiyuruvu	Whole plant	Ash, 500mg is made into small pills with lemon juice taken twice a day by mouth.
<i>Adhatoda vasica</i> Nees.	Acanthaceae	Adhatodai	Leaves	Leaves with roots of <i>Solanum surratense</i> and fruits of <i>Piper longum</i> in equal proportions and made into powder, 1 g mixed with honey taken for 1 week orally.
<i>Albizia lebbek</i> (Durazz.) Benth	Mimosaceae	Vaaghai	Bark	Decoction, 20ml for every 6 h or powder, 4g per day taken by mouth.
<i>Andrographis paniculata</i> (Burm.f) Wall. Ex Ness.	Acanthaceae	Nilavembu	Whole plant	Decoction of 10ml mixed with decoctions of <i>Evolvulus alsinoides</i> L. and <i>Mollugo pentaphylla</i> L. in equal proportions taken two to three times per day orally.
<i>Boerhaavia diffusa</i> L.	Nyctaginaceae	Mookkarattai	Roots	Juice, 15ml taken twice a day by mouth or decoction 50 ml taken twice a day orally.
<i>Calotropis gigantea</i> (L.) R. Br.	Asclepiadaceae	Yerukku	Seeds	Equal parts of ash and the powder of <i>Achyranthes aspera</i> L. plant mixed in equal parts along with lemon juice, 100mg taken per day by mouth.
<i>Centella asiatica</i> (L.) Urb	Apiaceae	Vallarai	Whole plant	Powder, 0.5-1 g taken twice a day orally
<i>Citrus medica</i> L.	Rutaceae	Elumicchai	Fruits	Juice of riped fruit, 10-15 ml, mixed with Jaggary, taken twice a day orally.
<i>Curcuma longa</i> L.,	Zingiberaceae	Manjal	Whole plant	Ash, 3-4 g taken twice a day orally Juice, 15 ml taken per day, 10-15 days orally
<i>Eclipta prostrata</i> L.	Asteraceae	Manjal Karisalanganni	Leaves	Leaves, mixed with leaves of <i>Encostemma axillare</i> , <i>Phyla nodiflora</i> , <i>Ocimum tenuiflorum</i> and <i>Plectranthus amboinicus</i> are roasted and juice is extracted, 2-3 tea spoon ful, 3-4 times a day orally.
<i>Feronia elephantum</i> (Gaertn.) Corr.	Rutaceae	Vilamaram	Fruits	Stuff, 5-10 drachms taken twice a day by mouth
<i>Indigofera tinctoria</i> L.	Fabaceae		Leaves	Juice, 10-15 ml taken per day for a week by mouth
<i>Mangifera indica</i> L.	Anacardiaceae	Mamaram	Fruits and seeds	Powder, 5 g mixed with honey taken per day orally
<i>Ocimum sanctum</i> L.	Lamiaceae	Thulasi	Leaves	Juice, 20 ml taken twice a day orally
<i>Papaver somniferum</i> L.	Solanaceae	Kasakasa	Seeds	Powder, 2.5-4.5 g taken per day by mouth
<i>Piper beetle</i> L.	Piperaceae	Vettrilai	Leaves	Liquid extract, 25 ml taken twice a day orally
<i>Piper longum</i> L.	Piperaceae	Milagu	Immature fruits and roots	Powder of roots 1-2g mixed with honey, taken twice a day orally. Decoction of immature fruit and root, 5-10 ml taken twice a day by mouth.
<i>Pistia stratiotes</i> L.	Araceae	Aagayathamari	Leaves	Decoction mixed with honey, 20-40 ml, taken twice a day, before food orally.
<i>Sida cordifolia</i> L.	Malvaceae	Mookkuthupoo	Roots	Powder, 150-450 mg taken per day or decoction, 50 ml taken twice a day by mouth.
<i>Solanum indicum</i> L.	Solanaceae	Manthakkali	Roots	Powder, 1.5-3 g or decoction, 20-60 ml mixed with pepper and honey taken twice a day orally.
<i>Solanum lycopersicum</i> Mill.	Solanaceae	Thakkali	Fruits	Juice, 50 ml mixed with honey taken twice a day by mouth
<i>Solanum trilobatum</i> L.	Solanaceae	Thudhuvilai	Leaves and fruits	Decoction, 20 ml taken per day orally
<i>Solanum xanthocarpum</i> (L.) Sch.	Solanaceae	Kandankatthiri	Roots and fruits	Powder, 1.5-3 g taken twice a day or decoction, 50 ml twice a day by mouth
<i>Terminalia chebula</i> (L.) Retz.,	Combretaceae	Kadukkai	Fruits	Powder, 1.5-2g taken twice a day orally
<i>Trianthema portulacastrum</i> L.	Aizoaceae	Saranai	Leaves	Decoction, 20-40 ml taken twice a day by mouth
<i>Vitis quadrangularis</i> (L.) Wall.	Vitaceae	Pirandai	Stem	Paste, 1-3 g mixed with honey taken twice a day by mouth
<i>Zingiber officinale</i> (Adans.) Rose.	Zingiberaceae	Ingi	Rhizome	Decoction, 20ml taken per day, thrice a day orally.

## Study area

Nagapattinam District of Tamilnadu is having full of natural vegetation and is lined by Bay of Bengal on eastern side. This district has a wonderful sea shore area and also has larger area of forest. This district is surrounded by Pudukkotai District in the South, Thiruvarur district in the West, Cuddalore District in the North.

There are several survey reports regarding the Botanical name, family name local name, parts of the plants used and mode of use of the medicinal plants (Sankar Ganesh et al, 2007; Ravindran et al., 2005; Jain et al., 2006; Dhandapani et al., (2007) on Ethno veterinary herbal practices in Thanjavur District (Tamilnadu), Sankarganesh et al., (2007) on Nagapattinam District

(Tamilnadu), Behera and Sen (2007) on Bargarh district (Orissa), Tripathy and Behera (2007) on Bolangir District (Orissa), Dhandapani et al., (2007) on Perambalur district (Tamilnadu) and John Britto (2007) Pacchamalai Hills of Tamilnadu.

## Methodology

Survey was made in this study area and the information were collected from tribal and non-tribal inhabitants and herbalists called Nattuvaidyars and Ayurvedic doctors. All plants used for the treatment of Respiratory diseases were collected and identified with the help of the floristic treatises published by Gamble (1915-1936), Naidu and Rao (1969), Mathew (1991), as well as through comparison with identified specimens. The collected information regarding the plant parts used,

methods of preparation of medicine, methods of consumption, combinations of plants and dosage were recorded.

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