

**A REVIEW ON PROFILE OF SOME ANTITUSSIVE HERBAL DRUGS**

**Dr. R. Margret Chandira, Surekha Bharatsingh Barwal\***

Vinayaka Mission’s College of Pharmacy, Vinayaka Mission’s Research Foundation (Deemed to be University),  
Salem-636008, Tamil Nadu, India.

\*Corresponding Author: Surekha Bharatsingh Barwal

Vinayaka Mission’s College of Pharmacy, Vinayaka Mission’s Research Foundation (Deemed to be University), Salem-636008, Tamil Nadu, India.

Article Received on 20/03/2021

Article Revised on 25/06/2021

Article Accepted on 20/07/2021

**ABSTRACT**

In this age of traditional medicine, maintaining quality standards is a matter of time. Current research shows the medicinal functions of Amla (*Emblica officinalis*), Bharangi (*Clerodendrum serratum*), Chitrak (*Plumbago zeylanica*), Kapurkachari (*Hedychium spicatum*), Kakadshingi (*Pistacia integerima*), Kantkari (*Solanum xanthocarpum*), Hirda (*Piper longum*), Pushkar roots (*Inula racemosa*), Bhahava (*Cassia fistula*), Honey. This article focused on the effects of various drugs on Asthma, cough, upper respiratory tract etc.

**KEYWORDS:** Cough, Antitussive, Herbal drugs, expectorant.

**1. AMLA (*Emblica officinalis*)**

<b>Family:</b>	<b>Euphorbiaceae</b>
English name:	Indian gooseberry, Embelic
Indian name:	Dhatri, Amlaka, Adiphala (Sanskrit) Amla, Amlika, Aonla (Hindi) Nelli, Malanelli (Tamil) Amalakkamu, Usirikai (Telugu) Amalak, Bettadanelli (Kannada) Amali, Ambala (Gujarathi) Amla, Amlaki (Bengali) Nelli (Malayalam)
Species:	<i>Phyllanthus emblica</i> Linn. <i>Embelica officinalis</i>



**USES:** *Emblica officinalis* Gaertn. or *Phyllanthus emblica* Linn, commonly known as Indian gooseberry or amla, is arguably the most important medicinal plant in the Indian traditional system of medicine, the Ayurveda. Various parts of the plant are used to treat a range of diseases, but the most important is the fruit. The fruit is

used either alone or in combination with other plants to treat many ailments such as common cold and fever; as a diuretic, laxative, liver tonic, refrigerant, stomachic, restorative, alterative, antipyretic, anti-inflammatory, hair tonic; to prevent peptic ulcer and dyspepsia, and as a digestive. Preclinical studies have shown that amla possesses antipyretic, analgesic, antitussive, antiatherogenic, adaptogenic, cardioprotective, gastroprotective, antianemia, antihypercholesterolemia, wound healing, antidiarrheal, antiatherosclerotic, hepatoprotective, nephroprotective, and neuroprotective properties.

**2. BHARANGI (*Clerodendrum serratum*)**

<b>Family</b>	<b>Lamiaceae</b>
Ayurvedic name	Bharangi
Unani name	Bharangi
Hindi name	Bharangi
English name	Blue-flowered Glory Tree
Parts used	Roots and Leaves



**USES** *Clerodendrum serratum* is a shrub which is not much branched with stems. The root of the plant is attributed with various activities like anti-inflammatory, digestive and carminative and many more. It is used to treat the conditions like inflammations, anorexia, cough, asthma, hiccup, tubercular glands, skin diseases etc. Various minerals like Na, Mg, Al, Ca etc. saponins, terpenoids, D-mannitol are the phytoconstituents present in the plant. Research works are carried out to study the pharmacognostic, physicochemical, hepatoprotective, anti-oxidant, anti-inflammatory, analgesic, antiasthmatic and various other activities.

### 3. CHITRAK (*Plumbago zeylanica*)

Family	Plumbaginaceae
Ayurvedic name	Chitrak
Unani name	Chita, Sheetraj Hindi
Hindi name	Chitra, Chira
Trade name	Chitrak, Chitrakmool
Parts used	Roots and milky juice



**USES:** *Plumbago zeylanica* Linn. (Plumbaginaceae) commonly called Ceylon leadwort or Chitrak, has good medicinal potential, hence enjoys important place among medicinal plants around the world for treatment of various diseases. It is held in high esteem in both Ayurveda and Unani. It possesses wide range of phytochemicals showing various pharmacological activities. The present review highlights the traditional medicinal uses, phytochemistry, pharmacological activities of *Plumbago zeylanica* Linn. and aims at encouraging and attracting attention of researchers for production of new drugs and extensive use of the plants.

### 4. KAPURKACHARI (*Hedychium spicatum*)

Family	Zingiberaceae
Ayurvedic name	Shati, Karchur
Unani name	Kapoor kachari
Hindi name	Kapoor kachri
Trade name	Kapoor kachri
Parts used	Rhizomes and essential oil from rhizomes



**USES:** Rhizome of *Hedychium* is aromatic, acidic, bitter, pungent, carminative, stomachic, stimulant, expectorant, anti-asthmatic, antiseptic, and anti-inflammatory, bronchitis, vomiting, dyspepsia. It has insect repellent properties, and is also used as a dye and perfume for making 'abir' powder used in 'Holi'.

### 5. KAKADSHINGI (*Pistacia integerrima*)

Family	Anacardiaceae
Ayurvedic name	Karkarashringi, Shringi
Unani name	Kaakarasingi
Hindi name	Kaakarasingi
English name	Pistanchio tree or Zebra wood
Trade name	Kakrashinghi
Parts used	Galls, kernels, foliage, bark



**USES:** Karkatshringi is useful for the treatment of asthma, chronic bronchitis, phthisis, diarrhea, fever and other ailments for the respiratory tract. Essential oil in Karkatashringi possess antioxidant activity. It also helps to relieve bronchial inflammation.

### 6. KANTKARI (*Solanum xanthocarpum*)

Family	Solanaceae
Ayurvedic name	Kantakari
Unani name	Katai khurd
Hindi name	Choti Kateri, Ringni
English name	Wild Eggplant, Yellow – Berried Nightshade
Trade name	Kantkari
Parts used	Whole Plant



**USES:** Ayurveda is one of the most ancient system of life, health and care. Indian Science of Medicine has the largest collection of medicinal plants. Kantakari Solanum Xanthocarpum (Schrad & Wendl.) of family Solanaceae is one of the 'Dashmoola' and used drug in Ayurveda. References about Kantakari are available since Vedic Kala, Samhita Kala, Madhyama Kala, Adhunik Kala. Ayurveda describes use of Kantakari in wide range of ailments like Kasa, Shwasa, Jwara, Pinasa, Parsvasoola etc. the drug is used as hepatoprotective, antiasthmatic, antioxidant, immunomodulatory, wound healing, antispermatic, antifertility, antipyretic, anticancer, anti-allergic, anthelmintic, antimicrobial. The phytochemical studies revealed the presence of active constituents, carbohydrates, amino acid, steroids, proteins, saponins, alkaloids, glycosides, and tannins in aqueous and alcoholic extracts.

#### 7. HIRDA (*Terminalia chebula*)

<b>Family</b>	<b>Combretaceae</b>
Ayurvedic name	Haritaki
Hindi name	Harad
English name	Myrobalan
Parts used	Fruit



**USES:** The fruit is mild laxative, stomachic, tonic, alterative, antispasmodic. It is useful in ophthalmia, hemorrhoids, dental caries, bleeding gums, ulcerated oral cavity. Its paste with water is found to be anti-inflammatory, analgesic and having purifying and healing capacity for wounds. Its decoction is used as gargle in oral ulcers, sore throat. Its powder is a good astringent dentifrice in loose gums, bleeding and ulceration in gums. It is good to increase appetite, digestive aid, liver stimulant, stomachic, gastrointestinal

prokinetic agent, and mild laxative. The powder of *T. chebula* fruits has been used in chronic diarrhea. It is used in nervous weakness, nervous irritability. It promotes the receiving power of five senses. It is adjuvant in hemorrhages due to its astringent nature and good for chronic cough, chorizo, sore throat as well as asthma. Also it is useful in renal calculi, dysurea, retention of urine and skin disorders with discharges like allergies, urticaria and other erythematous disorders

#### 8. PIMPALI (*Piper longum*)

<b>Family</b>	<b>Piperaceae</b>
Ayurvedic name	Pippali, Pipplamul
Unani name	Filfil Daraz
Hindi name	Pippal
English name	Long Pepper
Trade name	Piplamul
Parts used	Dried Spikes and Roots



**USES:** Plant root is used in Ayurveda as a carminative, tonic to the liver, stomachic, emmenagogue, abortifacient and aphrodisiac. Fruits contain haematinic, diuretic, digestive and general tonic properties, besides being useful in inflammation of the lever, pains in the joints, snakebite, scorpion sting and night blindness. The plant is also used in dyspepsia, abdominal pain and diuretic splenopathy, anorexia, asthma, fever and act as anti-haemorrhoidal and appetiser.

#### 9. PUSHKAR ROOTS (*Inula racemosa*)

<b>Family</b>	<b>Asteraceae</b>
Ayurvedic name	Puskara
Hindi name	Puskarmool
Trade name	Puskarmool
Parts used	Root and rhizome



**USES:** Pushkarmool is an aromatic tonic, febrifuge, and expectorant with anti-inflammatory, carminative, diuretic, and antiseptic properties. The plant is used in chronic bronchitis and rheumatism. Dried rhizomes and roots are used to cure loss of appetite and stomach troubles.

#### 10. BAHAVA (*Cassia fistula*)

<b>Family</b>	<b>fabaceae</b>
Ayurvedic name	aragvadha
Hindi name	amaltas
English name	Golden tree
Parts used	Whole plant



**USES:** *Cassia fistula* Linn. (Family: Caesalpinaceae), commonly known 'Sonali' or 'Bandarlati', has been used in different traditional system of medicines for various ailments since ancient times. *Cassia fistula* grows throughout in Bangladesh and in many other Asian countries such as India, China, Hong Kong, Philippines, Malaysia, Indonesia, and Thailand. This article aims to provide a comprehensive review on the phytochemical and pharmacological aspects of *Cassia fistula*. In traditional medicine, it has been used in the treatment of diabetes, hematemesis, leucoderma, pruritis, intestinal disorder and as antipyretics, analgesic and laxative. The fruits, stem bark, and leaves of this plant contain a variety of biologically active compounds such as anthraquinones, flavonoids, flavon-3-ol derivatives, alkaloid, glycosides, tannin, saponin, terpenoids, reducing sugar and steroids those have various medicinal properties. The fruit and stem bark extract shows various

activities like antipyretic, anti-inflammatory, antioxidant, antidiabetic, hypolipidemic, hepato-protective, antimicrobial, antitumor, antiulcer etc. The article reviews the various activities of the plant.

#### CONCLUSION

The last decades have seen a worldwide rise in the use of herbal drugs. Current world-wide interest in medicinal plants has led to rapid development and studies of many remedies employed by various ethnic groups of the world. The information is mentioned in common name of botanical name, common name, family, part used, active constituent, & reference. Scientists from divergent fields are investigating new plants with antitussive activity.

#### REFERENCES

1. Dineshkumar; Zulfiqar Ali Bhat; Ahmad Cashoo; Bronchodialator Activity in Traditional Medicines: Gift of God Kingdom; Techopen, 2011.
2. Theeshan Bahorun; Vidushi; S. Neergheen; Okezia I Aruoma; Phytochemical Constituents of Cassia Fistula; African Journal of Biotechnology, 2005; 4(13): 1530-1540.
3. Piyush Gandhi; Anandkumar C.; Pradeepkumar P. Effect of Formulations of Vasa (Avleha, Arishta and Ghrita) in the Management of Tamakashwasa (Bronchial Athma); Ayurpharm Int J Ayur Alli Sci., 2013; 2: 33-40.
4. Ankit P.; B.J. Patagiri.; Mukeshkumar Nariya; Hetal Aghera; P.K. Prajapati;2015; Antitussive Activity of Vasa Avleha Formulations on Sulphur Dioxide-Induced Coughing in Mice; Greenpharmacy. Info., July 2015; Ip 223.30.225.254.
5. Patil S.D.; Ninave P.B.; 2016; Invivo and Invitro Screening Models of Athma: An Overview; International Journal of Research and Development in Pharmacy and Life Sciences, 2016; 5(4): 2209-2218.
6. Rajput Shishankar; Mata Shweta; Dei Lp; Harisha C. R.; Shukla V.Vj.; Evaluation of Trivart Avleha with ref to the Pharmacognostical And Phytochemical Characteristics; 2016; Global J Res. Med. Plants & Indigen. Med., 2016; 5(8): 226-234.
7. Ferre *et al.*, 1990; Dhanalakshmi *et al.*, 2004.
8. Bhargava and Singh, 1981.
9. Gupta *et al.*, 1994; Lakdawala *et al.*, 1980.
10. \*Herbal pharmacopoeia.
11. Jahan Y. and Siddiqui H H. Study of Antitussive potential of Glycyrrhizaglabra and Adhatodavasica using a cough model induced by sulphur dioxide gas in mice. Int J PharmSciRes, 2012; 3(6): 1668-1674.
12. (2-Gupta YK, Katyal J, Kumar G, MEHLA J, KATIYAR CK, Sharma N. Evaluation of Antitussive Activity Of Fomulation With Herbal Extracts in Sulphur Dioxide Induced Cough Model in Mice. Indian J PhysiolPharmacol, 2009; 53(1): 61-66.

13. Mishra RK, Kumar A and Kumar A. Pharmacological activity of Zinger officinalee. *Int J Pharm ChemSci*, 2012; 1(3): 1073-1078.
14. Khan KH. Roles of Emblicaofficinalis in Medicine - A Review. *Bot Res Int*, 2009; 2(4): 218-228.
15. Mukherjee, PK. Quality control herbal drugs, 1st edition, Pharmaceutical publisher, 2002; 677.
16. Boskabady MH, Kiani S, Azizi H, Khatami T. Antitussive effect of Cuminumcyminum Linn. in guinea pigs. *Natural Prod Rad*, 2006; 5: 266-269.
17. Keter LK, Mwikwabe NM, Mbaabu MP, Sudheer HM, Tolo FM, Dhanani P, Orwa JA. Validation of Safety and Efficacy of Antitussive Herbal Formulations. *Afr J PharmacolTher* 2013; 2(1): 26-31.
18. Saraswathy GR, Sathiya R, Anbu J, Maheswari E. Antitussive Medicinal Herbs - An Update Review. *Int J Pharm Sci Drug Res*, 2014; 6(1): 12-19.
19. Nosalova G, Jurecek L, Chatterjee UR, Majee SK, Nosal S, Ray B. Antitussive Activity of the Water-Extracted Carbohydrate Polymer from Terminaliachebula on Citric Acid-Induced Cough. *Evidence-Based Compl Alter Med*, Article ID 650134, 2013; 1-7.
20. Kim KJ, Lee MS, Jo K, Hwang JK. Piperidine alkaloids from Piper retrofractumVahl. protect against high-fat diet-induced obesity by regulating lipid metabolism and activating AMP-activated protein kinase. *BiochemBiophys Res Commun*, 2011; 411(1): 219-25.
21. Kharade S, Gumate D, Kokane S, Patil V, Naikwade N. Study of antidepressant like effect of coriandrumsativum and involvement of monoaminergicandgabanergic system. *Int J Res Ayur Pharm*, 2011; 2(1): 267-270.
22. AyurvedicSarsangrah, ed 10, ShriBaidhyanath Ayurveda Bhavan ltd., 2001; 306, 387.
23. Gupta J, Gupta M K, Bhandari A, Gupta R. Preliminary pharmacognostical and physicochemical analysis: a poly herbomineral formulation. *Int. J. Drug. Dev. & Res.*, 2014; 5(2): 1-9.
24. Gupta J, Gupta M K, Bhandari A, Gupta R, Pathan I K. Preparation and standardization of polyherbomineral formulation. *Int. J. Drug. Dev. & Res.*, 2014; 6(2): 211-219.
25. Anonymous. Quality Control Methods for Medicinal Plant Materials, World Health Organisation, Geneva, 1998; 25-28.
26. Belal T, Awad T, Clark CR. Determination of paracetamol and Tramadol hydrochloride in pharmaceutical mixture using HPLC andGC-MS. *J ChromatSci*, 2009; 47: 849- 854.
27. Miyagoshi M, Amagaya S, Ogiwara Y. Antitussive effects of L-ephedrine, amygdalin, and makyokansekito (Chinese traditional medicine) using a cough model induced by sulfur dioxide gas in mice. *Plant Med* 1986; (4): 275-278.
28. Aziz A, Khan IA, Perveen A, Agha S, Munawar SH, Manzoor Z. Evaluation of antitussive activity of Lycopuseuropaeus on cough reflex induced by different cough induced models in mice. *Int J Pharma Sci*. 2013; 3(6): 381-385.
29. Marina GD, Kekuda TRP, Sudarshan SJ. Antitussive activity of ethanolic extract of Curcuma aromatic rhizomes on sulfur dioxide induced cough in mice. *Anesci Life*, 2008; XVII(3): 36-40.