

**A REVIEW ON REJUVENATING HERBS****S. Balamurugan<sup>1\*</sup>, G. Thanganila<sup>1</sup>, R. Madavan<sup>2</sup> and V. Banumathi<sup>3</sup>**<sup>1</sup>PG Scholar, Dept. of Nanju Maruthuvam, National Institute of Siddha, Chennai-47.<sup>2</sup>Lecturer, Dept. of Nanju Maruthuvam, National Institute of Siddha, Chennai-47.<sup>3</sup>Director, National Institute of Siddha, Chennai-47.Article Received on  
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47.**ABSTRACT**

Herbal medicines are plays on important role in the traditional system of medicine. Herbs are the rich source of powerful anti-oxidant. In our Siddha system of medicine many poly herbal and single herb formulations are used to treat the chronic diseases. The therapeutic effect of several plants used in the pharmaceutics is usually attributed to their anti-oxidant property. Rejuvenating herbs nourishes the body boost immunity and helps to keep the body and mind healthy, preventing the aging and death. It's make a person immortal. It gives complete freedom from illness. Rejuvenating herbs are practised in our Siddha system in the name of *Karpa* Medicine. The Aim of this article to expound home rejuvenating herbs used in the treatment of diseases on basis of Siddha text.

**KEYWORDS:** Siddha medicine, Herbs, Anti-oxidant.**1. INTRODUCTION**

Health is the topmost priority in every individual's life. It is a basic need of every human being. Siddha system is the most ancient medical system originated from the southern India, which is enriched with flora, fauna and mineral resources. Mainly herbal medicines are plays on important role in the traditional system of medicine. Herbs are the rich source of powerful anti-oxidant. In our Siddha system of medicine many poly herbal and single herb formulations are used to treat the chronic diseases. The therapeutic effect of several plants used in the pharmaceutics is usually attributed to their anti-oxidant property. Rejuvenating herbs nourishes the body boost immunity and helps to keep the body and mind healthy, preventing the early aging. Rejuvenating herbs are practised in our Siddha system in the name of *Karpa* Medicine. From that we would like to describe some plants which are having

anti-oxidant properties. Many herbal plants contains antioxidant compounds which protects cells against degenerative effects of Reactive Oxygen Species (ROS) which is a free radical such as singlet oxygen, superoxide, peroxy, radicals, hydroxy radicals.<sup>[1,2]</sup> The concept of oxidative stress is that, when a balance between ROS production and antioxidant defences is lost, 'oxidative stress' result which through a series of events deregulate the cellular function and leads to various diseases such as aging, arthritis, asthma, carcinogenesis, diabetes, rheumatism and various neuro degenerative disease.<sup>[3]</sup>

## 2. MATERIALS AND METHOD

### 2.1 *Withania somnifera* (Solanaceae)



**Tamil name:** *Amukkura kizhangu*

**English name:** Winter Cherry

**Sanskrit name:** Aswagandha

**Hindi name:** Asgandha

**Parts used:** Root

#### Chemical constituents

Much of Aswagandha pharmacological activity has been attributed to two main withanolides, withaferin A and withanolide D. Further chemical analysis has shown the presence of the following: Anaferine (Alkaloid), Anahygrine (Alkaloid), Beta-Sisterol, Chlorogenic acid (in leaf only), Cysteine (in fruit), Cuscohygrine (Alkaloid), Iron, Pseudotropine (Alkaloid), Scopoletin, Somniferinine (Alkaloid), Somniferiene (Alkaloid), Tropanol (Alkaloid), Withanine (Alkaloid), Withananine (Alkaloid) and Withanolides.<sup>[4]</sup>

### Uses

Root and bitter leaves are used as a hypnotic in alcoholism and emphysematous dyspnoea. Leaves are used as an anthelmintic and as an application to carbuncles. Fruits or seeds are used as diuretic, and to coagulate milk. Root is used as an application in obstinate ulcers and rheumatic swellings. Root is used in doses of about 30 grains in consumption, emaciation of children, senile debility, rheumatism, in all cases of general debility, nervous exhaustion, brain-fag, loss of memory, loss of muscular energy and spermatorrhoea.

The Powder was extracted with different solvents for obtaining various kinds of fractions and extracts by hot continuous extraction method using soxhlet apparatus. Following are the solvents used for extraction of 100 gm. *Withania somnifera* powder. The Powder was extracted with different solvents for obtaining various kinds of fractions and extracts by hot continuous extraction method using soxhlet apparatus. Following are the solvents used for extraction of 100 gm. *Withania somnifera* powder.<sup>[4]</sup>

### Solvents used for extraction Active principle extracts<sup>[4]</sup>

Ethanol + diethyl ether +

N-Butanol - Saponin

Methanol - Polar flavonoid

Ethyl acetate - Terpenoid

Chloroform - Non polar flavonoid

Ethyl acetate - Terpenoid

Chloroform - Non polar flavonoid.

The extracts were concentrated by evaporating the solvents on boiling water bath. The dried extract thus obtained was used for the assessment of antioxidant activity through various in vitro models. Preliminary qualitative analysis was carried out to ascertain the presence of flavonoid, tannin, protein, etc. Researchers from Banaras Hindu University in Varanasi, India and from the Drug Research and Development Centre, Calcutta, discovered that some of the chemicals in *Aswagandha* are powerful antioxidants.<sup>[5]</sup> They tested these compounds for their effects on rat brains and found an increase in the levels of three natural antioxidants; superoxide dismutase, catalase, and glutathione peroxidase.<sup>[6]</sup>

According to the researchers, "These findings are consistent with the therapeutic use of *Withania somnifera* (*Aswagandha*) in the traditional system medicine. The antioxidant effect

of active principles of *W. somnifera* may explain, at least in part, the reported anti-stress, cognition-facilitating, anti-inflammatory and anti-aging effects produced by them in experimental animals, and in clinical situations. Another study examined Aswagandha effect on copper-induced lipid peroxidation and antioxidant enzymes in aging spinal cords of laboratory mice. The herb produced a strong antioxidant effect and stopped the lipid peroxidation, which, in humans, is a cause of atherosclerosis leading to heart disease.<sup>[7]</sup>

## 2.2 Citrus limon (Rutaceae)



**Tamil name:** *Elumichai*

**English name:** Acid lime

**Sanskrit name:** Jambha

**Parts used:** Fruit, its juice, its oils from the rind, leaves and flowers

**Action:** Fruit is refrigerant; its juice is antiscorbutic, citric acid is a natural antiseptic against Fermentation in the stomach or bowels; it acts as a germicide.

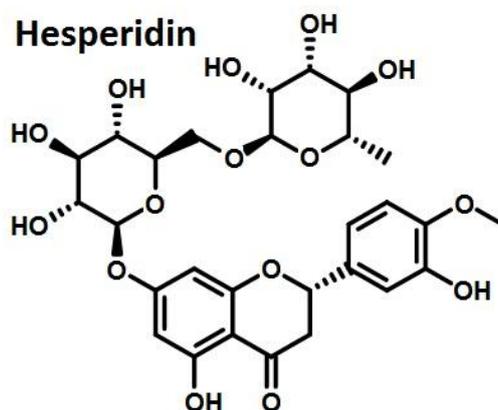
Lemons are an excellent preventative medicine and have a wide range of uses in the domestic medicine chest. The fruit is rich in vitamin C which helps the body to fight off infections and also to prevent or treat scurvy. It was at one time a legal requirement that sailors should be given an ounce of lemon each day in order to prevent scurvy.

Applied locally, the juice is a good astringent and is used as a gargle for sore throats etc. Lemon juice is also a very effective bactericide. It is also a good antiperiodic and has been used as a substitute for quinine in treating malaria and other fevers. Although the fruit is very acid, once eaten it has an alkalizing effect upon the body. This makes it useful in the treatment of rheumatic conditions. The skin of the ripe fruit is carminative and stomachic. The essential oil from the skin of the fruit is strongly rubefacient and when taken internally in small doses has stimulating and carminative properties. The stem bark is bitter, stomachic

and tonic. An essential oil from the fruit rind is used in aromatherapy. Citrus species contain a wide range of active ingredients and research is still underway in finding uses for them.<sup>[8]</sup>

The essential oil of Citrus limon exhibits an antioxidant action in preventing lipid peroxidation (probably due to hydroxyl radical scavenging activity) and a clear antinociceptive activity. Maybe it exerts its antinociceptive effect by central inhibitory mechanisms (opioid system) and that can be due to changes in motor coordination. This anti-inflammatory activity of the extract may play a role in action interfering with prostaglandin synthesis and also might involve redox-mediated mechanisms.

Hesperidin is a flavonoid glycoside originates amply in citrus fruits. It's a glycone arrangement is called hesperidin. Hesperidin is supposed to play a part in plant defence. It acts as antioxidant rendering to in vitro studies.<sup>[9,10]</sup> It reduces cholesterol.<sup>[9,11]</sup> and has anti-inflammatory effects.<sup>[9]</sup> It also presented an ability to perforate the blood brain barrier in an in vitro model.<sup>[9,10]</sup>



The citrus bioflavonoids that comprise hesperidine, quercetin, rutin (a glycoside of quercetin) and tangeritin, in addition to possess antioxidant activity and an ability to surge intracellular levels of ascorbic acid, rutin and hesperidin exert beneficial effects on capillary permeability and blood flow.<sup>[9]</sup> They also exhibit some of the anti-allergic and anti-inflammatory benefits of quercetin.<sup>[11]</sup>

The antioxidant activity and chelating activity of Citrus limon and is found to be significant when compared with the standard ascorbic acid and thus concluding that the synthetic antioxidants must be replaced by the natural antioxidants which don't have serious side effects but protect from really severe diseases which can occur and the effects of the Citrus limon extract are exerted by scavenging both active oxygen species and electrophiles.<sup>[11]</sup>

### 2.3 *Phyllanthus emblica* (Euphorbiaceae)



**Tamil name:** *Nelli*

**English name:** Indian gooseberry

**Sanskrit name:** Dhatri-phala

**Hindi name:** Amla

Parts used: Roots, seeds, bark, leaves, unripen fruit, ripen fruit and dried fruit

Action: Fresh fruit is refrigerant, diuretic and laxative.

Green fruit is exceedingly acid.

Fruit is also Carminative and stomachic.

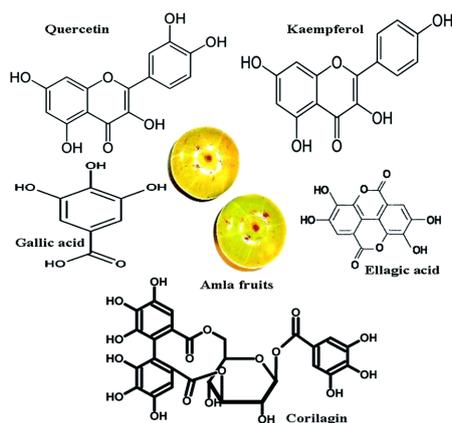
Dried fruit is sour and astringent.

Flowers are cooling and aperient.

Bark is astringent.

The fruits of *Phyllanthus emblica* (Euphorbiaceae), commonly known in India as amla, are consumed as fruit or in the form of food products. Traditionally, the fruit is useful as an astringent, cardiac tonic, diuretic, laxative, liver tonic, refrigerant, stomachic, restorative, alterative, antipyretic, anti-inflammatory, hair tonic, and digestive medicine.<sup>[12]</sup> It is reported to have hepatoprotective activity against carbon tetrachloride, anti-tumor, and radio protective effect against gamma irradiation, chemo preventive potential for hepato carcinogenesis, anti-proliferative and gastro protective activities. Polyphenols are widely distributed in plants and phenolic antioxidants have been found to act as free radical scavengers as well as metal chelators.<sup>[13]</sup>

### 2.3 (a). Phytochemical Screening



The qualitative phytochemical screening of the extract revealed the presence of tannins, saponins, flavonoids, alkaloids, steroids, fats and oils. The total phenolic content of the polyphenolic extract of *P. emblica* fruits was found to be  $20.60 \pm 0.12$  mg gallic acid equivalent/gm dry weight. The flavonoid content of the extract was  $15.80 \pm 0.20$  mg of quercetin equivalent/gm dry weight. The tannin content of *P. emblica* was found to be  $11.50 \pm 0.25$  mg rutin equivalent/gm dry weight.<sup>[14]</sup>

The protective effect of polyphenolic extract of *P. emblica* fruits on lead acetate induced oxidative stress in liver of rats and its free radical scavenging potential. The mechanism of protection relay on cellular action of flavonoids and their ability to modulate gene expression and the activity levels of enzymes involved in antioxidant defence and glutathione activity.<sup>[14]</sup>

### 3. DISCUSSION

Plants are the potential source of antioxidants for example Tannin, saponin, Terpenoid, Polar flavonoid, phenol, ascorbic acid, Non- polar flavonoid and many more having the capability to scavenge the free radicals. Their broad range of effects in biological system has drawn the attention of many experimental works. It has been proven that these mechanisms may be important in the pathogenesis of certain diseases and aging.

### 4. CONCLUSION

There are many reports that support the use of antioxidants supplementation in the reducing level of the oxidative stress and in slowing or preventing the development of complication associated with disease. Many synthetic antioxidants have shown toxic and/or mutagenic effects, which have shifted the attention towards the naturally occurring antioxidants.

Numerous plants constituents have proved to show free radical scavenging/ antioxidant activity.

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