

Potential of Herbal Remedies for Treatment of COVID-19

Minal Ghule *

Department of Pharmacy, Shri Saduguru Datta College of Pharmacy, Maharashtra, India

ABSTRACT

Current recommendation for the self-management of SARS-CoV-2 disease herbal medicine has played an important role in controlling infectious diseases. Clinical evidence from a range of studies of herbal medicine in the treatment of SARS Coronavirus (SARS-CoV) has shown significant results, and supported the idea that herbal medicine has a beneficial in the treatment and prevention of epidemic diseases. It is expected that many patients will add other symptomatic/adjuvant treatments, such as herbal medicines. The main purpose of this paper is to review typical and ongoing treatments for Coronavirus Disease including home remedies, herbal medicine, chemical drugs, plasma therapy, and also vaccines. In this regards, famous herbal medicines and common chemical drugs which are routinely to be prescribed for patients are introduced. Moreover, a section is assigned to the drug interactions and some outdated drugs which have been proved to be inefficient. We hope that this work could pave the way for researchers to develop faster and more reliable methods for earlier treatment of patients and rescue more people.

Keywords: Coronavirus; Therapeutic compounds; Drugs; Home remedies; Vaccine

INTRODUCTION

COVID-19 also referred to as SARS-CoV-2, has caused an international outbreak of acute respiratory illness. The rapid spread of COVID-19 was characterized as a pandemic by the World Health Organization on 11 March 2020. This pandemic has at least 177 countries, with approximately 154,000 facilities. Currently, there are no specific therapeutic agents for this disease, due to its broad clinical spectrum. In January 2020 the WHO declared global PHEIC about the epidemic problem of a new Coronavirus called 2019 novel Coronavirus (2019-nCoV), which was first appeared in Wuhan wet market, Hubei province. This virus genetically is very similar to a bat Coronavirus in the subgenus sarbecovirus. The WHO named the disease as COVID-19 and it spreads all over the world rapidly less than 3 months. Coronavirus can be classified into four genera and they are detected in a very wide selection of animal species including humans. Due to the high rate of contagious and highly nonspecific symptoms of this disease such as respiratory symptoms, cough, dyspnea, fever, and viral pneumonia, the

establishment of precise and fast diagnostic tests are urgently required to verify suspected cases, screen patients, and conduct virus surveillance new Coronaviruses barrier into humans have persisted and causes deadly pneumonia in humans Severe Acute Respiratory Syndrome Coronavirus (SARS-CoV), Middle-East respiratory syndrome Coronavirus, and SARS-CoV-2. Inspired by previous experience, herbal medicine is considered one of the alternative approaches in the treatment of COVID-19. In China, the national health commission has declared the use of herbal medicine combined with Western medicine as a treatment for COVID-19, and has issued many guidelines on herbal medicine-related therapy. To date, there is much clinical evidence that reports favorable of the usage of herbal medicine in the treatment of COVID-19. Several systematic reviews that included evidence from case reports, case series, and observational studies have also been conducted, to study the effectiveness of herbal medicine in the treatment of COVID-19. The main goal is to develop medicines or remedies for the treatment of COVID-19 disease to help researchers around the world.

Correspondence to: Minal Ghule, Department of Pharmacy, Shri Saduguru Datta College of Pharmacy, Maharashtra, India, Tel: 8779771098; E-mail: minalghule96@gmail.com

Received: 05-Jul-2022, Manuscript No. EOED-22-004-PreQc-22; **Editor assigned:** 08-Jul-2022, PreQC No. EOED-22-004-PreQc-22 (PQ); **Reviewed:** 22-Jul-2022, QC No. EOED-22-004-PreQc-22; **Revised:** 29-Jul-2022, Manuscript No. EOED-22-004-PreQc-22 (R); **Published:** 05-Aug-2022, DOI: DOI: 10.35248/2329-6631.22.11.178.

Citation: Ghule M (2022) Potential of Herbal Remedies for Treatment of COVID-19. J Develop Drugs. 11:178.

Copyright: © 2022 Ghule M. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

LITERATURE REVIEW

Prevention and treatment

Natural product and herbal remedies have long track record to treat respiratory disease. The herbal remedies were shown to be the effective preventive alternatives because they were more effective at blocking the human corona virus's receptor membrane and enzyme. According to statistics WHO, more than 80% of COVID-19 patients should take precaution at home. So, in this part, there are some suggestions for treating and prevention of SARS-CoV-2. Although there is no research to determine what is helpful specifically for this novel virus, the following are some natural remedies one can use to both treat symptoms as well as boost her/his immune system due to COVID-19 illness [1].

Ginseng: It is herb that has been used in traditional Asian medicine its potent anti-oxidant property which work for fighting inflammation it is beneficial lungs and human body organ. Ginsenoside compound could inhibit inflammation and increase antioxidant capacity in cell (Figure 1).



Figure 1: Health benefits of Ginseng.

Eucalyptus: The genus *Eucalyptus* belongs to the Myrtaceae family. *Eucalyptus* contains large amounts of volatile compounds such as 1,8-cineole, pinene, citronellal and linalool which are mostly found in the leaves of the plant *Eucalyptus* Essential Oil (EEO) which has a long history of medicinal use in the treatment of cough, cold, influenza, and other respiratory infections treating sinus congestion, common cold fever and other respiratory ailments. As an expectorant, cineole can reduce coughing, increase renal secretion, and strengthen the immune system (Figure 2).

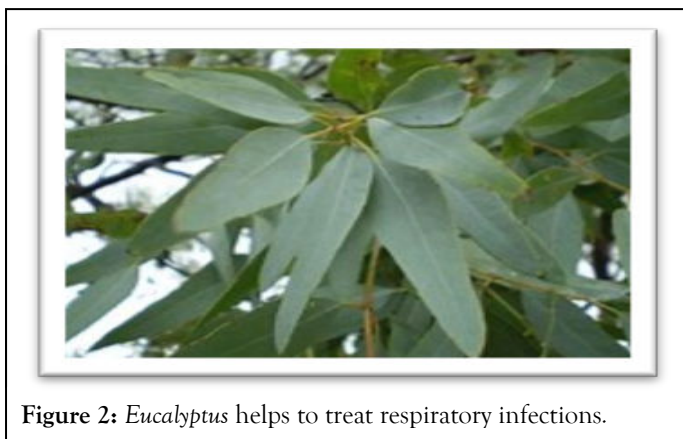


Figure 2: *Eucalyptus* helps to treat respiratory infections.

Elderberry: *Sambucus* is a genus of flowering plants in the family Adoxaceae. The various species are commonly called elder or elderberry [2]. The genus was formerly placed in the honeysuckle family, *Caprifoliaceae*, but was reclassified as Adoxaceae due to genetic and morphological comparisons to plants in the genus Adoxa. Black Elderberry (*Sambucus nigra*) traditionally has been used for immune support, both as a daily tonic and at the start of an immune challenge. Black Elderberry is unique in providing both antioxidant and immune support, due to its natural concentration of anthocyanins (the antioxidants that give it that deep purple color) and other flavonoids. It helps to treat cold infections and strengthen the immune system. (Figure 3).

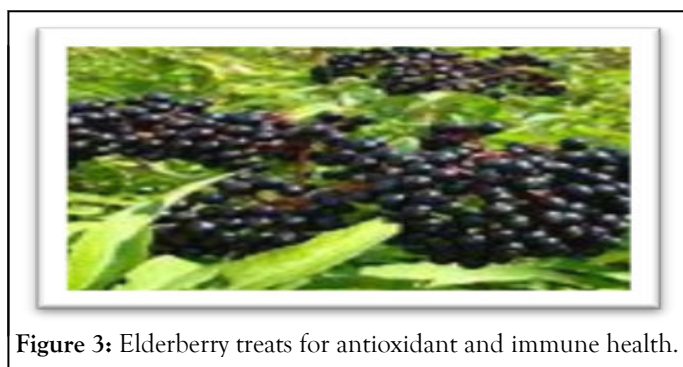


Figure 3: Elderberry treats for antioxidant and immune health.

***Andrographis paniculata*:** *Andrographis paniculata* leaf has been primarily studied to support immune system health by supporting healthy levels of immune cells in the blood, and healthy body temperature. In Ayurveda, *Andrographis* is known as the "king of bitter" and in Traditional Chinese Medicine, it has long been considered to be bitter and "cold." *Andrographis* is also used traditionally to support healthy microbial flora and gastrointestinal function, which in turn supports healthy immune function (Figure 4).

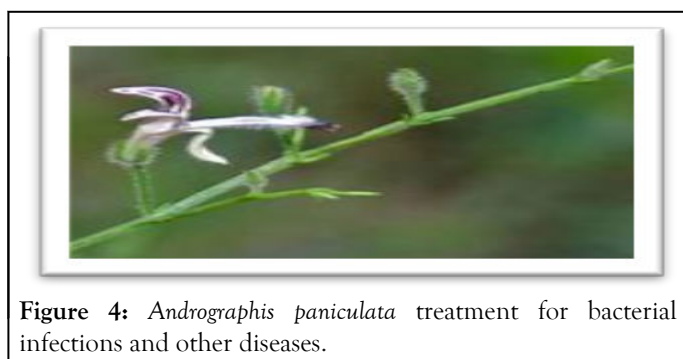


Figure 4: *Andrographis paniculata* treatment for bacterial infections and other diseases.

***Astragalus*:** It is derived from the leguminosea plant *Astragalus membranaceus*. Pharmacological studies have shown that several compounds from astragalus have stimulating the body resistance to infection and increase immune response decrease their chance of being infected by viruses and bacteria and enhance immunoglobulin production for restoration of lost t-cell activity. It contains astragaloside, flavonoid, and saponin which are used in prevention of common cold, foundational herb in traditional Chinese medicine. *Astragalus* root (Huang Qi) supports healthy resistance from occasional physical and emotional stressors, and supports healthy immune function. *Astragalus* polysaccharides, which are complex carbohydrates found in astragalus, interact

and instruct the gastrointestinal tract's microbiome and immune system. and microbiome residing in the gastrointestinal tract [3]. In studies, Astragalus has been shown to support the integrity of mucous membranes and epithelial cells in the intestinal tract, which in turn supports immune function in the respiratory tract. Because building a healthy defense takes time, we encourage you to think about your immune system all year long (Figure 5).

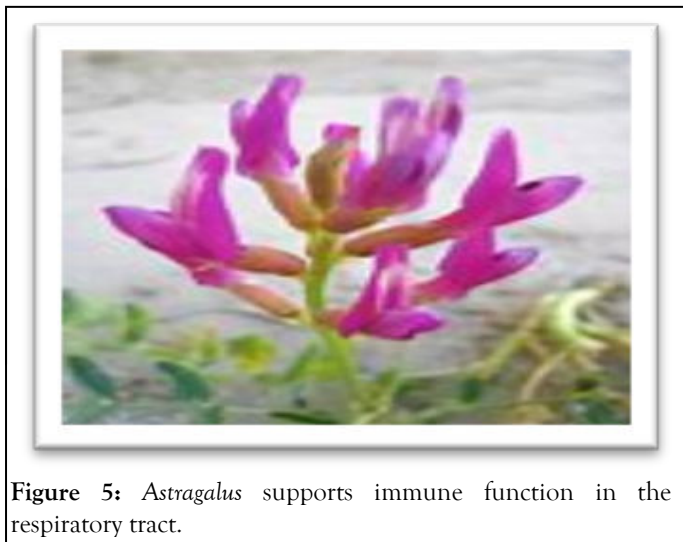


Figure 5: *Astragalus* supports immune function in the respiratory tract.

Oregano: Oregano (*Origanum vulgare*) Family: Lamiaceae means "joy of the mountain," as the herb prefers higher elevations in the Mediterranean region. In addition to centuries of use in kitchens across Europe, Oregano leaf has enjoyed an equally long history of supporting a healthy immune response. Our supercritical CO₂ extract of Oregano contains pungent volatile oils, including carvacrol and thymol, which offer support for maintaining healthy respiratory function and a healthy immune response. Oregano leaf can be used daily in culinary amounts to support health, and in concentrated oil of Oregano form to offer increased support when you need it most (Figure 6).



Figure 6: Oregano supports for maintaining healthy respiratory function and immune response.

Horehound: This leaf comes into Mint (*Marrubium vulgare*) Family: Lamiaceae. It is actually a common ingredient in cough because its natural properties, work as expectorant to aid in removal of mucus and secretion from lungs (Figure 7).



Figure 7: Horehound acts as an expectorant to help clear the lungs of mucus and secretions.

Bergamot: It belongs to *Citrus aurantium*, subspecies bergamia (Risso) belongs to family Rutaceae. Its antibiotic and disinfectant properties aid in killing virus and ability to relieve feeling of stress and anxiety (Figure 8).

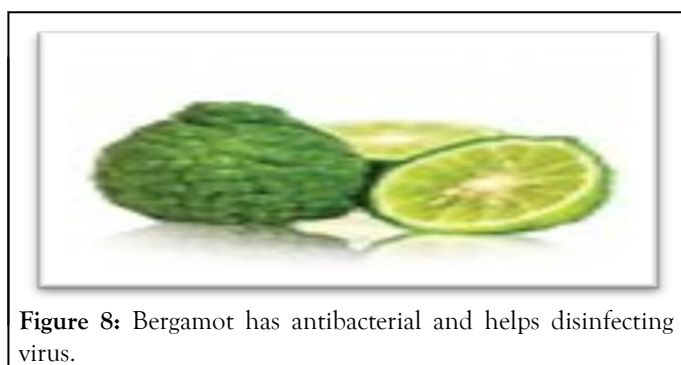


Figure 8: Bergamot has antibacterial and helps disinfecting virus.

Peppermint: Peppermint (*Mentha piperita*,) belongs to family Lamiaceae. It is k,also known as *Mentha balsamea*. It is a hybrid mint, a cross between water mint and spearmint. Indigenous to Europe and the Middle East, Chinese peppermint, or "Bohe" is derived from the fresh leaves of *Mentha haplocalyx*. *Mentha piperita* and *Mentha haplocalyx* are both recognized as plant sources of menthol and menthone and are among the oldest herbs used for both culinary and medicinal products promote relaxation in the muscle of airway within lungs them to open up so that they can take in more oxygen (Figure 9).



Figure 9: Peppermint helps in relaxation in the muscle of airway within lungs.

Mullein: Mullein is *Verbascum thapsus* belongs to family Scrophulariaceae. It is an herb used in lungs and respiratory system for soothing effect mullein leaves has antibacterial properties that fight against both gram positive and gram negative bacteria (Figure 10).



Figure 10: Mullein helps for lungs and smoothen respiratory system.

Olive: *Olea europaea* has been a revered plant throughout human history, as far back as the ancient Egyptians and Greeks, where it was recognized as a symbol of wisdom, peace, and longevity. While much attention is given to the antioxidant support of olives and olive oil, olive leaf also provides antioxidant support [4]. The evergreen leaves of the Olive tree must produce their own antioxidants to withstand the radiation from hot, dry sun. Olive Leaf was used historically to support cardiovascular health, glycemic health, and immune health, by supporting healthy body temperature and healthy levels of immune cells (Figure 11).



Figure 11: Olive supports to maintain levels of immune cells.

Cumin: Cumin (*Cuminum cyminum*) is an annual herb that belongs to the family Apiaceae. Cumin contains volatile oil (3-4%), the major active principle of volatile oil is cuminaldehyde, which is present to an extent of 45-50% and is an important phytochemical and possesses many health benefits. It shown that antioxidant activity blood platelet aggregation cumin seeds contain flavonoids, viz., apigenin and luteolin, which are now generally recognized to have antioxidant activity. The petroleum ether soluble fraction of cumin has been reported to have antioxidant activity. Cuminaldehyde has been demonstrated to scavenge the superoxide anion [5]. Cumin extract in ether inhibited arachidonate-induced platelet aggregation in human platelets in a dose-dependent manner (Figure 12).



Figure 12: Cumin is an important phytochemical for healthy body

Lavender: Lavender Essential Oil (LEO) is commonly obtained from *Lavandula angustifolia*, a species of flowering plants belonging to the Lamiaceae. It is beneficial for those with copod because it contains antioxidant properties also decrease cortisol, the cortisol is known as stress hormone so with decreased production of cortisol it cause airway which is more difficult to breathe, so decrease stress level the air way of lungs is open and removes carbon dioxide (Figure 13).

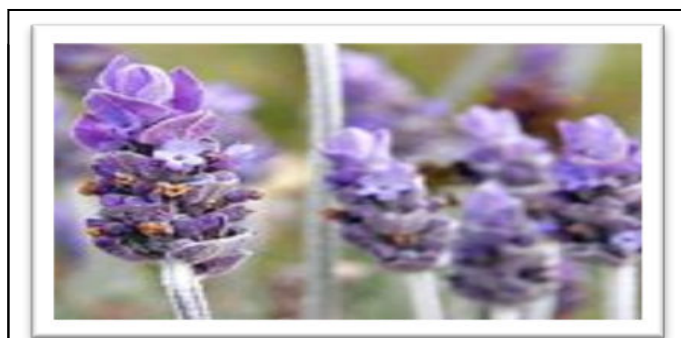


Figure 13: Lavender help relieve stress.

Osha root: This herb's root helps in boosting lung blood flow, and it also contains antihistamine properties that are effective in treating sinus and other respiratory conditions. Osha root is a great immune system booster. Lymphocytes are an important part of the immune system and a type of white blood cell designed to fight disease and illness (Figure 14).



Figure 14: Osha root is considered an immune booster.

Dill seed: Dill seed (*Anethum sowa*) belonging to the family Apiaceae. The main constituents of dill oil is pale yellow in color, darkens on keeping, with the odor of the fruit and a hot, acrid taste are a mixture of a paraffin hydrocarbon and 40 to

60% of d-carvone (23.1%) with d-limonene (45%). It also consists of α -phellandrene, eugenol, anethole, flavonoids, coumarins, triterpenes, phenolic acids and umbelliferones. It is considered to be a powerful boost for immune system of human beings and also good for oral care [6]. Dill has long been associated with antimicrobial activity. It can prevent a number of microbial infections of the body including the infections result in open wounds or small cuts on the skin (Figure 15).

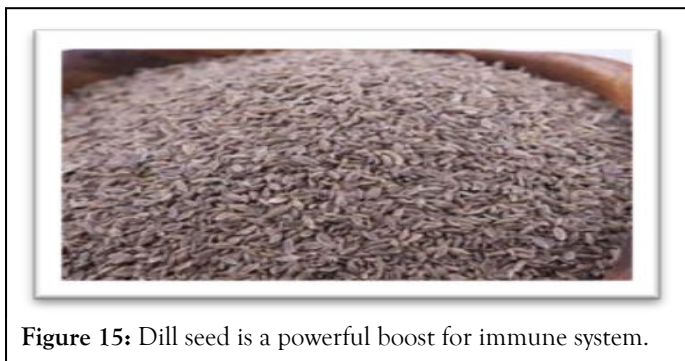


Figure 15: Dill seed is a powerful boost for immune system.

Curcumin: Curcumin (*Curcuma longa*) the “Indian saffron” it is a yellow orange spice and medicinal herb that has been used for thousands of years. It is one of the most well researched spices, explored for its therapeutic properties. Previous finding has proven that it has therapeutic potential as antifungal, antiviral, antioxidant, anti-inflammatory, and management of other pharmacological activities. Curcumin, the major constituent of turmeric has been proven responsible for its clinical therapeutic properties. Curcumin also shows pivotal role in the modulation of immune system. The prebiotic-like properties of turmeric has been explored which enable it to make changes in the gut microbiota and support the gut-immune connection [7]. Curcumin is capable of lowering cortisol levels which in turn help in maintaining balance in the immune system (Figure 16).

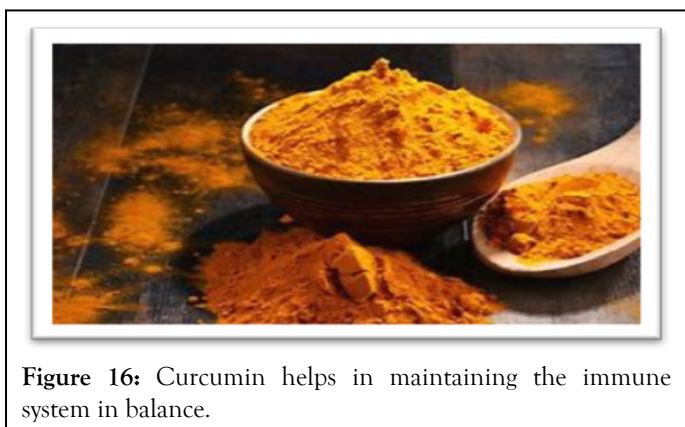


Figure 16: Curcumin helps in maintaining the immune system in balance.

DISCUSSION AND CONCLUSION

Drugs having different labelled uses are currently being tried in various combinations as supportive treatments. Essential oils have long been known to have anti-inflammatory, antioxidant, immunomodulatory, and antiviral properties and are being proposed to have activity against SARS-CoV-2. Additionally, plant extracts induce few reported side effects compared to those of immunomodulatory pharmaceutical drugs. The current literature strengthens the potential of various EOs as suitable immunomodulatory alternative treatments for infectious or immune diseases. Furthermore, these compounds also provide good efficacy as preventive medicine, which promotes a general healthy lifestyle. It is also good for oral care and can be a powerful boost for immune system of human body.

REFERENCES

1. Hotta M, Nakata R, Katsukawa M, Hori K, Takahashi S, Inoue H. Carvacrol, a component of thyme oil, activates PPAR α and γ and suppresses COX-2 expression. *J Lipid Res.* 2010;51(1):132-139.
2. Marshall JS, Warrington R, Watson W, Kim HL. An introduction to immunology and immunopathology. *Allergy Asthma Clin Immunol.* 2018;14(2):1-10.
3. Retelny VS, Neuendorf A, Roth JL. Nutrition protocols for the prevention of cardiovascular disease. *Nutr Clin Pract.* 2008;23(5):468-476.
4. Zarraga IG, Schwarz ER. Impact of dietary patterns and interventions on cardiovascular health. *Circulation.* 2006;114(9):961-973.
5. Tapsell LC, Hemphill I, Cobiac L, Sullivan DR, Fenech M, Patch CS, et al. Health benefits of herbs and spices: The past, the present, the future. *Med J Aust.* 2006;185(S4):S1-S24.
6. Vaidya AD, Devasagayam TP. Current status of herbal drugs in India: An overview. *J Clin Biochem Nutr.* 2007;41(1):1-11.
7. Dhifi W, Bellili S, Jazi S, Bahloul N, Mnif W. Essential oils' chemical characterization and investigation of some biological activities: A critical review. *Medicines (Basel).* 2016;3(4):25.