

**HERBAL REMEDIES PREVENTION OF COVID-19****Anil Kumar Gupta<sup>1</sup>, Manoj Sharma<sup>2</sup>**<sup>1</sup>Jaipur College of Pharmacy, Jaipur, Rajasthan, India<sup>2</sup>School of Studies in Pharmaceutical Sciences, Jiwaji University, Gwalior, M.P.Corresponding author: Manoj Sharma (E-mail: [manojdrde@gmail.com](mailto:manojdrde@gmail.com))**ABSTRACT**

Coronavirus disease 2019 (COVID-19) is an infectious disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The disease was first identified in December 2019 in Wuhan, the capital of China's Hubei province, and has since spread globally, resulting in the ongoing 2019–20 coronavirus pandemic. As of 29 April 2020, more than 3.11 million cases have been reported across 185 countries and territories, resulting in more than 217,000 deaths. More than 932,000 people have recovered. Plant materials are used through developed and developing countries as home remedies, over-the-counter drug products and raw materials for the pharmaceutical industry, and represent a substantial proportion of the global drug market. Some herbal remedies are helpful to improve the immunity system which will be beneficial to prevention of COVID-19.

**Keywords:** Herbal remedies, COVID-19, Coronavirus, Immunity Boosters.

**INTRODUCTION:**

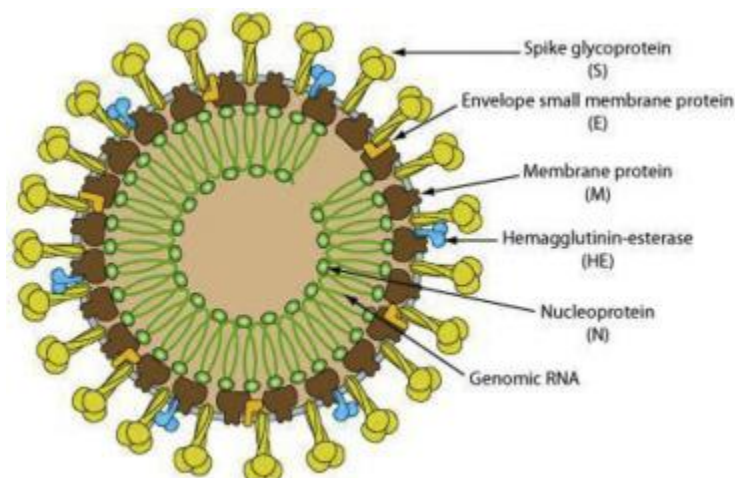
According to the World Health Organization (WHO), viral diseases continue to emerge and represent a serious issue to public health. In the last twenty years, several viral epidemics such as the severe acute respiratory syndrome coronavirus (SARS-CoV) in 2002 to 2003, and H1N1 influenza in 2009, have been recorded. Most recently, the Middle East respiratory syndrome coronavirus (MERS-CoV) was first identified in Saudi Arabia in 2012.

The potential for these viruses to grow to become a pandemic worldwide seems to be a serious public health risk. Concerning COVID-19, the WHO raised the threat to the CoV epidemic to the "very high" level, on February 28, 2020. Probably, the effects of the epidemic caused by the new CoV has yet to emerge as the situation is quickly evolving. On March 11, as the number of COVID-19 cases outside China has increased 13 times and the number of countries involved has tripled with more than 118,000 cases in 114 countries and over 4,000 deaths, WHO declared the COVID-19 a pandemic.[1]

**Coronavirus genome structure and life cycle**

COVID-19 is a spherical or pleomorphic enveloped particles containing single-stranded (positive-sense) RNA associated with a nucleoprotein within a capsid comprised of matrix protein. The envelope bears club-shaped glycoprotein projections. Some coronaviruses also contain a hem agglutinin-esterase protein (HE) [2]

COVID-19 is identified with an initial outbreak in Wuhan (China) in December 2019. On January 29th of 2020, the National TCM Rescue Team (China) intervened at the Wuhan Jinyintan Hospital. After five days, eight patients afflicted with COVID-19 were discharged after treatment with Chinese medicine. Of these eight individuals, six had been critically ill prior to administration of traditional Chinese medicine. [3]



**Fig 1:** Structure of Novel COVID-19 Virus

### TO PREVENT THE SPREAD OF COVID-19

- Clean your hands often. Use soap and water, or an alcohol-based hand rub.
- Maintain a safe distance from anyone who is coughing or sneezing.
- Don't touch your eyes, nose or mouth.
- Cover your nose and mouth with your bent elbow or a tissue when you cough or sneeze.
- Stay home if you feel unwell.
- If you have a fever, a cough, and difficulty breathing, seek medical attention. Call in advance.
- Follow the directions of your local health authority.
- Avoiding unneeded visits to medical facilities allows healthcare systems to operate more effectively, therefore protecting you and others.[4]

### HERBAL MEDICINE:

Herbal medicine is still the mainstay of about 75 - 80% of the world population, mainly in the developing countries, for primary health care (Kamboj, 2000). This is primarily because of the general belief that herbal drugs are without any side effects besides being cheap and locally available (Gupta and Raina, 1998). According to the World Health Organization (WHO), the use of herbal remedies throughout the world exceeds that of the conventional drugs by two to three times (Evans, 1994). The use of plants for healing purposes predates human history and forms the origin of much modern medicine. Many conventional drugs originated from plant sources: a century ago, most of the few effective drugs were plant based. Examples include aspirin (willow bark), digoxin (from foxglove), quinine (from cinchona bark), and morphine (from the opium poppy) [5]

The WHO has recently defined traditional medicine (including herbal drugs) as comprising therapeutic practices that have been in existence, often for hundred of years, before the development and spread of modern medicine and are still in use today. Traditional medicine is the synthesis of therapeutic experience of generations of practicing physicians of indigenous system of medicine. Traditional preparations comprise medicinal plants, minerals and organic matter etc. Herbal drugs constitute only those traditional medicines which primarily use medicinal plant preparations for therapy.[6]

### IMMUNITY BOOSTER AYURVEDA PREPARATION:

- Grind Tulsi leaves, black pepper and Ginger together and then boil them in water. To sweeten the concoction you can add some honey. This kadha works wonders for cold and cough.
- Mix half teaspoon of cinnamon powder in a cup of water and bring it to boil. Add a teaspoon of honey and drink up for strength and energy.

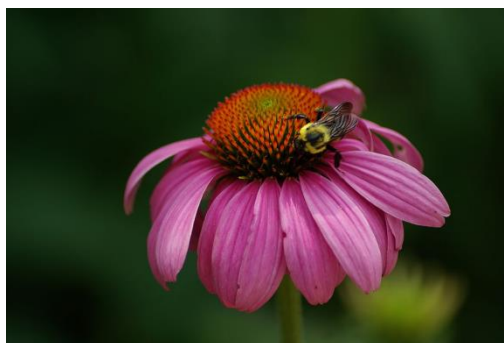
- Grind about half teaspoon of giloy guduchi (Indian Tinospora ), add it to a cup of water and boil. This decoction aids digestion, boosts your immunity and fights symptoms of flu.[4]

#### **HERBS USED AS ANTIVIRAL:**

Not only do antiviral herbs fight viral infections, boost the immune system and work as flu natural remedies, but they have a number of other health benefits, such as cardiovascular, digestive and anti-inflammatory support [3-10].

#### ***Echinacea***

Echinacea has become one of the top-selling herbs of all time; that's because regular use of echinacea is beneficial for immune support and overall health. There is considerable evidence suggesting that phytochemicals in echinacea have the capacity to reduce virus infections and tumors.



#### ***Garlic***

Experiments have shown that garlic — or specific chemical compounds found in garlic — is highly effective at killing countless microorganisms responsible for some of the most common and rarest infections, including tuberculosis, pneumonia, thrush and herpes.



#### ***Astragalus Root***

Astragalus root, another powerful antiviral herb, has been used in traditional Chinese medicine for centuries, and its main use is to boost the body's immune system. Scientific studies have shown that astragalus has antiviral properties and stimulates the immune system, suggesting that it may help remedy the common cold or flu.



### ***Turkey Tail***

Turkey tail mushroom is well-known for its ability to stimulate immune function. It contains polysaccharides that have immune-boosting power when consumed. When researchers evaluated the immune-modulating effects of turkey tail, they found that it was able to increase antiviral cytokines and had modest effects on growth factors.



### ***Licorice Root***

Licorice root is emerging as a prominent player in the search for treatment and prevention for diseases like hepatitis C, HIV and influenza.



### ***Olive Leaf***

The olive leaf has antiviral properties, giving it the ability to treat the common cold and dangerous viruses, including candida symptoms, meningitis, pneumonia, chronic fatigue syndrome, hepatitis B, malaria, gonorrhea and tuberculosis; it also treats dental, ear and urinary tract infections and is a natural treatment for shingles.

The leaves of Olive trees (*Olea europaea*) contain a substances called elenoic acid and calcium elonate has been identified as a powerful inhibitor of a wide range of viruses in laboratory tests., including influenza, herpes, polio and coxsackie viruses. These substances block the production of enzymes that allow viruses to replicate.

**Oregano**

Oregano is a powerful antiviral agent. Medicinal grade oregano is distilled to extract the essential oil and preserve its healing compounds; in fact, it takes over 1,000 pounds of wild oregano to produce just 1 pound of oregano oil!

Oregano oil benefits are proving to be superior to some antibiotics, without the harmful side effects. That's because oregano contains two powerful compounds, carvacrol and thymol, that have powerful antibacterial and antifungal properties.

**Pau d'arco**

Pau d'arco (*Tabebuia impetiginosa*), also known as lapacho or ipe roxo, is an Amazon tree with healing inner bark that can treat colds, influenza, herpes and viral stomatitis. It contains quinoids that inhibit virus replication by damaging the DNA and RNA inside the viral protein that would insert itself in a healthy human cell and replicate.



**Green Tea**

Green tea (*Camellia sinensis*) contains a group of flavonoids called catechins, which appear to inhibit viral infections by blocking the enzymes that allow it to reproduce. Green tea has been known to be effective in inhibiting HIV, herpes simplex and the hepatitis B virus.

**Sage**

Sage is an essential ingredient in traditional Chinese medicine and Ayurvedic medicine. Traditional herbalists value sage for its ability to help fight infections and improve a number of ailments.

**CONCLUSION:**

The wide spread use of herbal medicine is not restricted to developing countries. The rebirth of herbal medicine, especially in developed countries, is largely based on a renewed interest by the public and scientific information concerning plants. They must have adequate knowledge and should be more open to discuss with their patient regarding herbal medicine. Patient disclosure of herbal use may provide an opportunity for the physician to redirect the patient towards effective conventional health care. By taking a complete drug and supplement history, a dialogue can be initiated to rationally compare the appropriateness of herbal remedies and regulated pharmaceuticals in relation to the severity of the condition. Patient with chronic conditions such as AIDS or cancer should also be warned that some of the adverse effect of herbals is often similar to symptoms of problem associated with their disease or treatment, thus making it difficult to discern if the disease or the “remedy” is the problem.

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