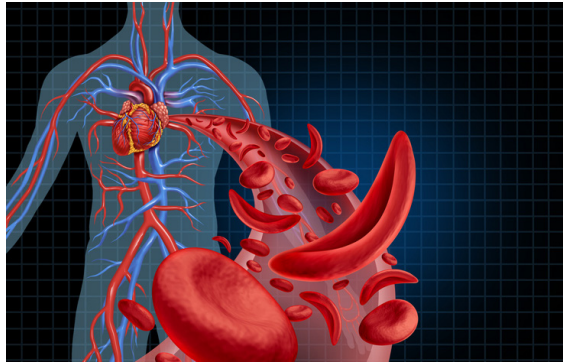


## Ayurvedic Medicine for Sickle Cell Anemia Shows Positive Results Against COVID-19

A study approved by Indian Council of Medical Research (ICMR) reported that a medicine being used for sickle cell anemia for the past 13 years has shown promising results in treatment of coronavirus patients with mild to moderate symptoms.

The 21-day trial recently completed on a group of 30 COVID-19 home quarantined patients, all of them having various co-morbid conditions, in Vyara town of Tapi district, showed significant improvement in various key blood markers, oxygen saturation and fast return of the lost taste and smell. All patients had mild to moderate COVID infection.



The study approved by ICMR was done by Dr. Atul Desai using T-AYU-HM Premium, the medicine used for the treatment of sickle cell anemia since 2007, in combination with onion steam vaporisation and nebulisation. Dr. Desai was the principal investigator at Vyara-based Ayurveda Healthcare and

Research Centre along with Dr. Hemshree Desai and Dr. Chirag Desai.

Dr. Desai explained that the herbal medicine combined has shown positive results in sickle-cell anemia patients as it increases the red blood cells (RBC) whose function is to transport oxygen from lungs to other body tissues.

“We observed marked improvement in oxygen saturation, respiratory rate, CRP (inflammation marker) ESR (infection marker) and LDH (which shows signs for damage to tissues). The elevated markers came within the normal range in five to seven days in all 30 patients,” said Dr. Desai.

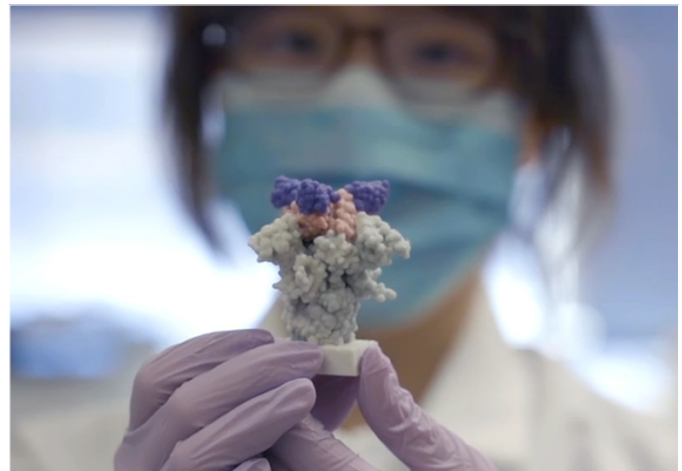
## Novel Inhalable Nanobody Therapy Deactivates Coronavirus

Researchers at the University of Pittsburgh have developed a new antibody-type therapy for SARS-CoV-2. The treatment exploits “nanobodies” that are harvested from llama blood. The new nanobody therapy can be used in an inhalable form that may deactivate the virus within the lungs.

To create the therapeutic, the researchers immunized a llama called Wally with a portion of the SARS-CoV-2 spike protein. A couple of months later, they were able to isolate nanobodies against the spike protein from a sample of the llama blood and used a mass spectrometry technique to identify which nanobodies bound to the virus. The study titled ‘Versatile and multivalent nanobodies efficiently neutralize SARS-CoV-2’ is published in *Science*.

A fraction of a nanogram of the purified nanobodies is sufficient to prevent the virus from infecting 1 million cells, suggesting that the new therapeutic could be a potent treatment for those suffering from an infection.

The nanobodies also seem to be highly stable, and can survive at room temperature for at least six weeks while also surviving a process to turn them into an inhalable therapeutic, which could be a useful treatment



for those experiencing acute respiratory symptoms.

Targeting the treatment directly to the lungs could also help to reduce costs as it will mean smaller overall doses. With traditional antibody therapeutics, the antibody is delivered intravenously, requiring a large quantity to achieve the correct concentration in the target organs, which in this case is the lungs. This leads to incredibly high costs. For instance, a treatment with conventional SARS-CoV-2 antibodies can cost as much as \$100,000 per patient.

## Citrus Aromatherapy for Treating Liver Cancer

As main component of essential oils, terpenes can inhibit the growth of different cancer cells. Researchers from the Ruhr-University Bochum headed by Prof Dr Dr Dr Hanns Hatt have analysed this process in liver cancer cells in detail. They shed light upon the molecular mechanisms that resulted in cancer cells stop growing, following the application of (-)-citronellal, and they proved that the olfactory receptor OR1A2 is the crucial molecule for that purpose. In future, the olfactory receptor could serve as target for liver cancer diagnosis and therapy. The researchers report their findings in the journal *Archives of Biochemistry and Biophysics*.

Researchers from Bochum utilised a cellular model of hepatocellular carcinoma, a common liver tumour. They exposed the cells to a subset of terpenes with different concentrations, and monitored their reactions. It emerged that two of the eleven terpenes tested resulted



in a significant increase in calcium concentration in the cells: (-)-citronellal and citronellol. During a follow-up analysis, the researchers focused on (-)-citronellal and scanned for a receptor into which the terpene has to fit like a key into a lock. They demonstrated that the decisive olfactory receptor OR1A2 occurs in liver cells and is responsible for detection of the citrus scent and cellular reaction. If the option for producing that

receptor had been removed from the cells, they did no longer react to the terpene. The researchers, moreover, succeeded in tracking the signalling pathway which the terpene uses for increasing calcium concentration inside the cells, thus reducing cell growth. "These results are yet another example for the significance of olfactory receptors outside the nose, and they give rise to hope that new drugs with no severe side effects may be developed for cancer therapy."

## Immunity Strengthening Herbal Medicine

Herbal drug Fifatrol helps fight infection, flu and cold. Fifatrol as an immunity-boosting ayurvedic drug has found a mention among around 200 technologies and research activities evaluated by experts in a recently released compendium for combating coronavirus.

Fifatrol acts as an immunity enhancer which is a multi-drug combination of ayurvedic classical medicines and herbs. Researchers have suggested that Fifatrol acts as a natural antibiotic and fights infection, flu and ache.

Elaborating the salient features of the drug, the compendium stated that Fifatrol is a natural formulation providing fast relief from nasal con-



gestion, sore throat, body ache and headache.

"It is enriched with scientifically validated botanical extracts and micro-nutrients. It is a rational combination of vital phytoconstituents, immunomodulators and antioxidants which justifies its beneficial effect for the treatment of viral up-

per respiratory infections," it said.

Fifatrol is a formulation of well-known immunity enhancer herbs like 'Guduchi', 'Sanjeevini Ghanvati', 'Daruharidra', 'Apamarga', 'Chirayata', 'Karanja', 'Kutaki', Tulsi, 'Godanti' (Bhasam), 'Mrtyunjaya Rasa', 'Tribhuvana Kriti Rasa' and 'Sanjivani Vati'.

The drug offers improved immune system in top notch form to fight off viral, bacterial and other infections; normalises raised body temperature, fastens recovery and eases the associated symptoms like flu, cold and congestion, the compendium stated.

## Phototherapy for Treating Jaundice in Newborn

Phototherapy is a type of medical treatment that involves exposure to fluorescent light bulbs or other sources of light like halogen lights, sunlight, and light emitting diodes (LEDs) to treat certain medical conditions. It's sometimes used to treat newborn jaundice by lowering the bilirubin levels in the child's blood through a process called photo-oxidation.

Photo-oxidation adds oxygen to the bilirubin so it dissolves easily in water. This makes it easier for the child's liver to break down and remove the bilirubin from their blood.

There are 2 main types of phototherapy:

Conventional phototherapy – where the child is laid under a halogen or fluorescent lamp with their eyes covered.

Fibreoptic phototherapy – where the child lies on a blanket that incorporates fibreoptic cables; light travels through the fibreoptic cables and shines on to the child's back.

In both methods of phototherapy, the aim is to expose child's skin to as much light as possible.

In most cases, conventional phototherapy is usually tried first, although fibreoptic phototherapy may be used if the child was born prematurely.

These types of phototherapy will usually be stopped for 30 minutes every 3 to 4 hours.

If the child's jaundice doesn't improve after conventional or fibreoptic phototherapy, continuous multiple phototherapy may be offered. This involves using more than one light and often a fibreoptic blanket at the same time. Treatment won't be stopped during continuous



multiple phototherapy.

During phototherapy, child's temperature will be monitored to ensure they're not getting too hot, and they'll be checked for signs of dehydration.

Intravenous fluids may be needed if child is becoming dehydrated and they aren't able to drink a sufficient amount.

The bilirubin levels will be tested every 4 to 6 hours after phototherapy has started to check if the treatment is working. Once child's bilirubin levels have stabilised or started to fall, they'll be checked every 6 to 12 hours.

Phototherapy will be stopped when the bilirubin level falls to a safe level, which usually takes a day or two.

Phototherapy is generally very effective for newborn jaundice and has few side effects, although the child may develop a temporary rash and diarrhoea.

## Wormwood Essential Oil Improves Digestion, Reduces Pain and Inflammation

Wormwood (*Artemisia absinthium*) is a perennial herb native to Europe and now grown around the world. This potent plant has traditionally been used to rid the body of unwanted parasites, hence the name "wormwood". The essential oil extracted from this bitter-tasting herb has many other powerful health benefits, including improving digestive health, pain manage-



ment, and reduced inflammation.

A study published in the *Journal of Helminthology* showed that wormwood induces paralysis and death in these unwanted parasites in animals as effectively as leading anti-parasitic medications.

Wormwood's effectiveness in eliminating malaria is well-documented. Research shows that drink-

ing tea made from dried wormwood leaves is the most effective anti-malarial therapy available.

Wormwood's medicinal properties increase appetite and encourage the production of saliva and other digestive enzymes that encourage movement of the intestinal muscles, helping food move along the digestive tract to support healthy digestion. Since 70% of the immune sys-

tem resides in the digestive tract, wormwood indirectly helps support and sustain overall health.

A small clinical trial showed promising results that wormwood has potential pain-relieving and anti-inflammatory benefits. Patients in the study reported significant reductions in pain levels after taking 150 mg of wormwood extract twice a day over a 12-week period.

The researchers found that wormwood is more effective and safer than traditional medications used to treat rheumatoid arthritis. Another study showed that when 3% wormwood skin ointment is applied to sore joints three times a day, it can help reduce pain levels and improve physical function in patients with osteoarthritis.

### Benefits of Reflexology in Pain Management

**R**eflexology is a form of bodywork that involves applying pressure to the hands and feet to produce changes in pain and other benefits elsewhere in the body. The underlying theory behind reflexology is that there are certain points or "reflex areas" on the feet and hands that are connected energetically to specific organs and body parts through energy channels in the body.

By applying pressure to reflex areas, a reflexologist is said to remove energy blockages and promote health in the related body area. Here are some examples of reflex areas and their corresponding body parts:

- The tips of the toes reflect the head
- The heart and chest are around the ball of the foot
- The liver, pancreas, and kidney are in the arch of the foot
- Low back and intestines are towards the heel

According to reflexologists, pressure on the reflex points also helps to balance the nervous system and



stimulates the release of endorphins that help to reduce pain and stress.

Reflexology is used to address stress and stress-related conditions, migraines, digestive disorders, arthritis, insomnia, hormonal imbalances, menstrual disorders, and post-operative or palliative care.

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