

# Do we have a good anti-viral? Testing Chinese Skullcap in practice

Nutritional therapist **ANNA HAYNES** is a big fan of the Chinese herb *Scutellaria*. With NO suggestion it can work against SARS-CoV-2, she reviews the research that has led her to lean on it in practice, and shares a case study that shows its health-building benefits.



**T**he use of antiviral herbs can be traced back to as early as Ancient Egypt and China, where, unlike prescription medication, they have been used for centuries with little to no side-effects.

Some antiviral herbs have the potential to stop viruses in their track, whilst boosting the immune system. Chinese Skullcap is one of these, and also supports the body with a broad spectrum of health benefits.

*Scutellaria baicalensis* is a member of the mint family, rich in flavones, and has remained one of the most significant antiviral medicinal plants within traditional Chinese herbal medicine for more than 2,000 years.

The success of Chinese Skullcap as an antiviral has been reported to lie in the broad actions resulting from flavones densely contained within the roots. There are three key antiviral mechanisms. Firstly, through its inhibition of the single viral protein hemagglutinin-neuraminidase. This action effectively puts a halt to viral replication. Additionally, key flavone properties contained within the root extract may prevent viral fusion within cells and offer cytoprotective mechanisms against viral-initiated cytokines and associated cascades. Thirdly, Chinese Skullcap has been shown to inhibit viral release from infected cells and increase apoptosis of virus infected cells.

## Chinese Skullcap vs other varieties

There are two varieties of skullcap on the market – Chinese (*Scutellaria baicalensis*) and American (*Scutellaria lateriflora*). The Chinese is the specific species most studied, revered and used in China, and must not be confused with *S. lateriflora*, which is the variety commonly used in the US. These are different plants and come with different purported benefits. *S. lateriflora* will not have the effect we are seeking for infections.

The root is considered the strongest part, especially when addressing viral infections.

And since the Chinese do continue to use many forms of Skullcap, after several millennia of trying the roots of all of the varieties available, the Chinese concluded that *S. baicalensis* is superior.

## Benefits and studies

Chinese Skullcap is particularly useful as an immune modulator when the body is under stress or up against immune-suppressing conditions typical of viral infection. Benefits include supporting immune function, reducing allergenic responses and lowering inflammation. It is also used for upper respiratory tract infections and seasonal allergies such as hay fever.

The mechanism of action is through the inhibitory effect against the neuraminidase enzyme activity in influenza, and likewise, against the respiratory syncytial virus (RSV).

The two most widely-studied compounds within Chinese Skullcap are flavone antioxidants called baicalin and baicalein, and oroxylin A, found in the root.

Baicalin and baicalein have been shown to stimulate the production of monoclonal antibodies NS3 and NS5, known to counter the encephalitis virus E protein. Although there are multiple causes of encephalitis that include trigger viruses such as the herpes simplex virus (HSV-1) as well as bacteria, mycotoxins from fungi and parasites, Japanese Encephalitis (JE) claims between 35,000-50,000 victims each year, with 25% mortality and 50% of the survivors developing permanent neurological damage.

A study on rats in 2005 and another in 2019 have both shown baicalein, wogonin, neobaicalein, and skullcapflavone – all contained within the *S. baicalensis* variety to effectively slow down the growth of prostate cancer tumours.

And another study on mice in 2008 looked at the flavonoid mosloflavone and oroxylin A, again found in the root. These compounds helped to protect against memory-impairment thought to be induced by the amyloid beta

plaque that forms in the brains of Alzheimer Disease patients. This study also showed that baicalein may help to protect nerve cells from damage associated with Parkinson's disease. It clearly has strong neurological benefits.

Chinese Skullcap offers protective benefits in terms of apoptosis, which come from the compounds norwogonin and oroxylin A. These have both been found to inhibit Cocksackievirus B3-induced cell death. Oroxylin A has also been shown to reduce viral titres in the pancreas and decrease the inflammatory cytokines IL-6 and TNF-alpha, understood to be involved within all viral infection cytokine storms.

## Some contra-indications

Chinese Skullcap is believed to be safe and well-tolerated by adults, with few side-effects. However, drowsiness has been reported in some cases.

Those with type 2 diabetes are recommended to avoid using the herb unless under the guidance of their GP, as it may lower blood sugar, increasing the risk of hypoglycaemia.

Chinese Skullcap is a synergist, interacting with drugs and herbs. Therefore, caution needs to be exercised when taking medicines, since Chinese Skullcap can increase or decrease the bioavailability of any drugs taken alongside it.

For instance, Chinese Skullcap strongly inhibits the CYP3A4 enzyme in the liver, a member of the cytochrome oxidase system. The inhibition of this enzyme means Chinese Skullcap is dose-dependent, meaning the more of the herb you take, the greater the inhibition of the associated drugs.

In some cases, Chinese Skullcap impacts this enzyme, raising bioavailability and makes a pharmaceutical drug stronger. But with other drugs it can do the reverse, speeding up metabolism, with metabolites created by CYP3A4 then remaining active, volatile and potentially problematic in the body. Also, in this instance, the effect of the drug will be reduced and have less overall effect.

Another example of how Chinese Skullcap

acts as a synergist lies with the compound oroxylin A, since this is a P-glycoprotein inhibitor. P-glycoprotein is present in the blood-brain barrier and the lining of the GI tract, as well as other important barriers in the body. This protein is primarily responsible for “the amount of a substance” that crosses over these barriers, while protecting what is on the other side. Any P-glycoprotein inhibitor promptly allows “more of a substance” to cross barriers that are high in this protein. Therefore, any other herb, drug or nutrient taken alongside it will end up with higher levels in the bloodstream, increasing its overall impact.

### A virus always seems to have “helpers”

In clinical practice, it helps to understand that a virus is a simple entity without its own means of reproduction, therefore viruses rely on their host to replicate and survive. This helps us to select antiviral herbs and other agents alongside, in order to maximise an outcome.

We know that viruses may remain dormant over long periods of time until the environment in the body is conducive to their re-emergence. Often a co-virus will be contracted, or mycotoxins ingested, lowering the host’s immune system and overall threshold to disease.

All complex health cases seem to, upon investigation, involve one or more viral infections alongside co-infections such as parasites, bacteria and mycotoxins that lower overall immunity. Once it has been established there has been exposure to one or more viral infections, and that multiple systems are affected (established through taking a comprehensive verbal case history), I have found it useful to create a protocol using multiple anti-microbials, including one or more antivirals. Depending on where my kinesiology testing takes me, this may lead to a protocol with four or more distinct phases.

■ The first phase focuses on the client and what they would expect, with the intention to reduce their overall symptoms. Examples of symptom reduction may be related to reducing inflammation, oxidative stress, manifesting as a reduction of aches, stiffness, and pains.

■ The second phase would be to understand and heal the client’s specific gut issues, and to strengthen the blood-brain-barrier (BBB). During this phase we also support and open all drainage pathways.

■ The third phase might be to break any biofilm that surrounds pathogenic organisms and to clear out co-infections (eg parasites and moulds).

■ The fourth phase would be to introduce antiviral herbs and other agents.

It’s worth noting that any pathogenic burden will always alter gene expression (epigenetics)

therefore affecting protein production, cellular activity and the downstream consequences such as oxidative stress, inflammation and the ability to carry out biotransformation (detoxification) functions. The phases above, when implemented strategically, can help to mitigate further symptoms stemming from epigenetic changes.

### Case study: chronic inflammation, pain and tiredness

CJ is a 62-year-old female presenting with chronic inflammation in her knees, specifically behind the joints, and finger joints and tiredness. She uses ice-packs and on most days needs to sit down from midday onwards to reduce the inflammation. Her symptoms increase when standing, and with stress. This symptomology had been constant for eight months and CJ feared that arthritis was setting in.

### First interventions

Over a period of 12 months, the first three phases of CJ’s protocol were implemented. Natural remedies were used to heal the gut, improve digestion and specifically support pancreatic function. She removed all foods that were shown to be potential intolerances, identifying them via kinesiology testing. She also responded well to methylated B-vitamins for five months, before we reduced this to P-5-P (active vitamin B6) only.

The outcome was that all of CJ’s symptoms improved; she reported zero pain behind her knees and incredible levels of energy.

### Setback

However, then, within a single year, each of CJ’s three children gave birth to grandchildren, and with dotting attention on the new arrivals her symptoms came back, although they were not as bad as before.

At that point, I decided to conduct two functional lab tests. The Adrenal Stress Profile test showed that her cortisol was high for all four readings: 39.27 (RR), 14.46 (RR), 14.54 (RR) and 8.85 (RR) respectively. CJ also completed a comprehensive stool analysis with parasitology. The results showed some interesting markers in Dysbiotic Flora with some known pathogenic bacteria: *Citrobacter freundii* complex 4+, *Enterobacter cloacae* complex 3+, and *Klebsiella oxytoca* 4+. There were also some commensal bacteria imbalances: *Alpha haemolytic strep* 4+ and *Gamma haemolytic strep* 4+. No ova or parasites were found. Kinesiology testing did, however, indicate that both ova and parasites were present.

For the next six months CJ embarked on an intensive parasite cleanse, during which time she told me she saw more than 100 parasites exit rectally. She stopped counting after 100! But many continued to exit for just over twelve

months.

Six months into the parasite programme, she experienced an increase in her symptoms. I explained this was due to an increase body burden of microbial toxins – akin to die-off; parasites host viruses, moulds and environmental toxins, locking these toxicants into our body tissues systemically, which are then released in the process of elimination. Although CJ was taking various toxin binders, these did not completely mitigate the increase of symptoms.

Every six weeks CJ was tested with kinesiology for further anti-microbials; Chinese Skullcap and Houttuynia were introduced around six months into her parasite cleanse. At each stage, kinesiology was used as the guiding tool to ascertain the appropriate time of introduction and dose for all of the natural remedies taken during CJ’s protocol.

### Phasing

CJ noticed significant and lasting improvement within three months of starting the Chinese Skullcap. She then came off it for two months, as indicated by muscle testing within her kinesiology session. Symptoms continued to improve, but then testing indicated that she would benefit from taking Chinese Skullcap again, so she went back on it after the two-month break for another seven months, taking it alongside other complementary remedies.

Although CJ reported that her stress load had increased, she no longer experiences pain behind either knee, or pain in her finger joints, even with additional stresses from her very energetic grandchildren and the travelling to visit them, as part of her commitment as a new grandmother. On the contrary, she reports high energy and a zest for life.

### How it fits into my work

From a clinical perspective, I love to include Chinese Skullcap in clients’ remedial programmes, as I know that it will reach and inhibit viruses and retroviruses that can otherwise destroy health. I often use it alongside the Nutramedix products Serra-Enzyme, Houttuynia and Chanca Piedra where chronic health conditions are present. Clients are happy to take remedies that they understand to be game-changers within their health paradigm. These herbs belong in that category. 

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