

# CORONAVIRUS: COVID-19



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# PREAMBLE

As a clinical herbalist and naturopath, I deal with whatever comes through my door. Often, a patient arrives with a medical diagnosis but sometimes they do not. In such a situation a combination of good case-taking and various examination techniques can provide a rationale for a strategy. Lab work can confirm this approach if necessary. Using an energetic heuristic model (hot, cold, dry, damp) then allows the means to individualise a herbal formula and offer appropriate adjunct advice. This is what makes herbal medicine unique.

If a patient had come to clinic and CoVID-19 had not been all over the news, one would likely approach it as any other respiratory infection. The main symptoms currently attributed to CoVID-19 include a fever, a dry cough and shortness of breath, all of which are indicative of a hot and dry condition. There appears to be a lack of mucous production and no diarrhoea allowing this differentiation. Accordingly, an initial strategy would be to use cool and moistening formulas at a basic energetic level.

However, people are individuals and there can be other co-morbidities and predispositions which could alter the energetic pattern and influence the eventual protocol. For example, there could be a secondary bacterial infection (common in viral infection) which could blur the lines.

While we might keep our traditional approach central, we also need to be aware that although information is slowly coming to light, we may be dealing with something entirely new. There is no historical footnote in any ancient herbal you might care to mention, and sparse clinically-relevant information to date, however this does not mean we can afford to be idle.

What we do have to work with is information from other respiratory infections involving a coronavirus surfacing over the last 20 years. Interestingly, coronaviruses diseases generally affecting animals, and were only first detected in humans in the 1960s (Jeffrey and Mackintosh, 2005).

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Quite when cross-species coronavirus mutations began, and how they began, is a matter of ongoing research, but factory farming was implicated in the Swine Flu scare a decade ago ([Compassion in World Farming, 2009](#)). CoVID-19 is thought to have appeared due to cross-species contamination. Prevention is better than cure, and strong measures need to be taken to stop factory farming and prevent other cross-species infections in the future.

Approximately 20% of common cold infections are also coronaviruses, which are generally mild and self-limiting, so we do have recent clinical knowledge with which to compare this new but related infection. What is similar, what is different? First of all, none of the symptoms attributed to CoVID-19 are new. Many other bacterial and viral infections may cause them, and so clinical experience of other infectious conditions can also be useful.

In Naturopathic philosophy, the concept of host immunity is central. This sharply contrasts with the current dominant paradigm in medicine which is based on the work of Louis Pasteur and Robert Koch. The history of antagonism is well-documented between the followers of Pasteur and the Germ Theory of Infection on the one hand, and the followers of his contemporary Antoine Beauchamp and his Cell Theory on the other. Beauchamp challenged germ theory, and it is just a theory after all, by simply asking why everyone didn't succumb to infection when a virulent agent was active in the same household. He echoed Virchow, another contemporary of Pasteur and one of the founders of germ theory, who said "If I could live my life over again, I would devote it to proving that germs seek their natural habitat: diseased tissue, rather than being the cause of diseased tissue". In other words, Beauchamp believed the internal environment of the body (host immunity) that determines whether or not an infectious agent will take root, and if it does take root how virulent it will be ([Laleva, 2004](#)). The theories of Beauchamp may not be fully correct but the current saga suggests that there needs to be an independent re-evaluation of the current Germ Theory paradigm.

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It comes as no surprise that the daily statistics coming in about CoVID-19 indicate that those most susceptible are the immuno-compromised. Those dying from the virus tend to be the elderly while children and young adults, with generally better immunity, may get minor and self-limiting symptoms and possibly no symptoms at all. Recent research has determined that the lungs, where CoVID-19 takes root, are not the sterile environment we once thought, but contain an array of microbiotic species much in the way that largely commensal bacteria occupy the human gut and contribute significantly to the integrity of the immune system ([Liverpool, 2020](#)).

There will no doubt be other viral mutations in the future so it seems necessary that prophylaxis should be a central subject of research, and at least some of the concepts of Beauchamp and cell theory be given unbiased and overdue reconsideration.

There seems to be another debate, and that is what to do to prevent the spread of CoVID-19. This presupposes that the disease can be limited. Consider the flu for example. It happens annually and cannot be contained. A vaccine is on offer but this is often based on a single strain and may be ineffective if another strain becomes prevalent. Another issue is that the flu jab may actually cause the flu in immuno-compromised persons. Because someone has a flu jab and doesn't get the flu does not necessarily mean that it was the vaccine that afforded them protection.

The various exclusion policies currently in place around the world may only serve to delay the inevitable. Generally speaking, herd immunity as it is called, can only be activated with widespread exposure. As a child I remember chicken pox "parties" – one kid in the street would have the virus and all the parents would bring their kids round to expose them to the disease. In this way they would form immunity, possibly after a short and mild illness, and protect the children from getting the much more serious condition Shingles in later life. A process such as this would create herd immunity in time. But this approach, while safe in a limiting disease such as Chicken Pox, becomes questionable when

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dealing with a virus that can kill a vulnerable section of the community.

A report in the Atlantic ([2020](#)) quotes Harvard epidemiology professor Mark Lipsitch stating “I think the likely outcome is that (CoVID-19) will ultimately not be containable. Lipsitch predicts that within the coming year, some 40 to 70 percent of people around the world will be infected with the virus that causes COVID-19. But, he clarifies *emphatically*, this does not mean that all will have severe illnesses. “It’s likely that many will have mild disease, or may be asymptomatic”.

This paper is intended for herbal practitioners and researchers, a summary will be given elsewhere. It is intended to bring ideas to the table for discussion in the hope that herbal medicine can make a significant contribution to the strange emergence of CoVID-19.

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# INTRODUCTION

It is now common knowledge that an outbreak of a coronavirus erupted in Wuhan, China towards the end of 2019. Coronaviruses themselves are nothing new, but this outbreak involves a novel strain which has not been previously encountered. This coronavirus SARS-CoV2, causes CoVID-19, which has begun to spread across the world creating panic and uncertainty in its wake.

Comparatively speaking, more people die of influenza viruses annually than have died from CoVID-19. This has left many questioning the sensationalist headlines and current media saturation which some see as disproportionate and fear mongering. For example, *The Times* reports that annual deaths from influenza range from 290,000 to 650,000 every year, but as of March 2020 there are around 205,000 cases and 9000 deaths attributed to CoVID-19 ([Times, 2020](#)). Some are wondering if the infection will be used as a platform to demand mandatory vaccinations in the future, and conspiracy theories abound. For example, the online hacker group Anonymous have released information which raises some interesting questions about the possible origin of the virus ([Anonymous, 2020](#)). But a particularly interesting post appeared recently which raises serious questions about the current tests being used to determine CoVID-19 infection. The author, David Crowe, also raises alarming questions about Koch's Postulates, a cornerstone of identification of a new infectious agent, which he believes have not been employed ([Crowe, 2020](#)).

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**Koch's postulates are as follows:**

- The virus must be present in every case of the disease.
- The virus must be isolated from the host with the disease and grown in pure culture.
- The specific disease must be reproduced when a pure culture of the virus is inoculated into a healthy susceptible host.
- The virus must be recoverable from the experimentally infected host.

However, I have found one study which claims Koch's postulates were fulfilled ([Bao et al., 2020](#)). Nonetheless, there are many unanswered and intriguing questions raised by Crowe and others about the remarkable events that are unfolding day by day. Crowe believes the virus doesn't exist. Yet, we must assume that until clear, independent and verifiable evidence to the contrary is available that a virus does exist. We cannot afford to be complacent. But that does not mean we must stop asking questions. We must also consider that the virus may not be as dangerous as some sources claim. However, the greater danger may lie with ongoing and increasing restrictions that will plunge us deeper into worldwide economic recession, while the fear being generated across all forms of media is causing and will continue to cause mass stress and other multiple health issues in the wider community.

Multiple clinical trials are currently under way in a bid to develop a vaccine to CoVID-19, but this could be some time away, and in the end it may not be effective. We must stay vigilant in the coming weeks and months.

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# WHAT IS A CORONAVIRUS?

A coronavirus (CoV) is a positive-sense, single-stranded RNA (ssRNA) virus embedded in a lipid envelope belonging to the order Nidovirales, family Coronaviridae, subfamily Coronaviridae ([Schoeman and Fielding, 2019](#)). Coronaviridae infect birds and mammals including humans, generally causing respiratory infections. There are many corona viruses already known, making up a large family. They are given the name corona because under magnification they display a corona (star-like) appearance. Some strains of the common cold can be caused by coronaviruses (HCoV-229E and HCoV-OC4 in particular).

In recent years, more aggressive forms of coronavirus have emerged. The Severe Acute Respiratory Syndrome coronavirus (SARS-CoV) emerged in 2003. It was thought to have been transmitted from cats. The Middle East Respiratory Syndrome coronavirus (MERS-CoV) emerged in 2014. It was thought to have been transmitted from camels. Both conditions are enzootic, meaning that coronaviruses are mutating and crossing the species barrier. CoVID-19 was initially thought to have come from bats, though a recent article in the journal Nature suggests it may be from the ant-eating Pangolin but the research remains inconclusive ([Cyranoski, 2020](#)).

Whichever animal may be implicated, there are serious long-term questions about the hygiene conditions of open markets selling flesh products, as well as factory farming which creates the ideal conditions for zoonotic cross-species infection. There are also questions around genetic modification and interspecies gene splicing as the long term consequences of this activity, including potential viral mutation, remain unknown and cannot possibly be verified through short term experiments.



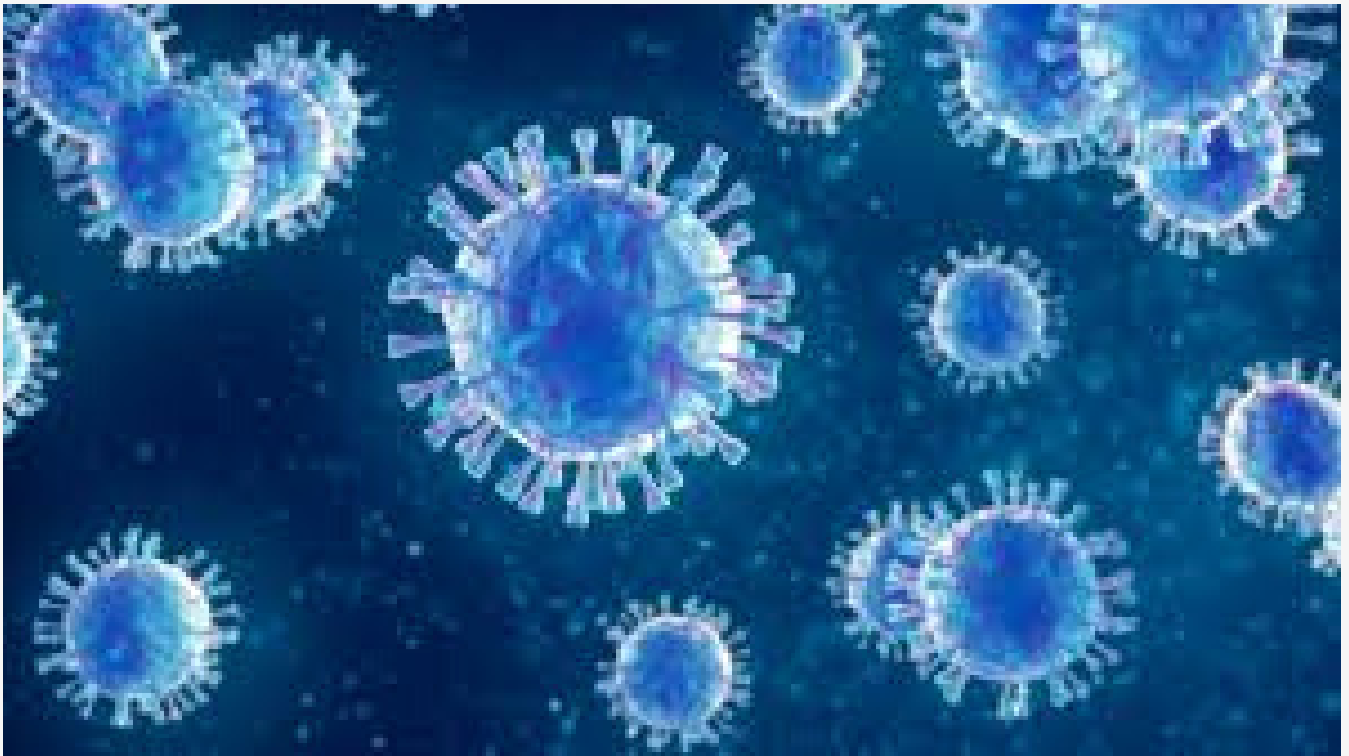


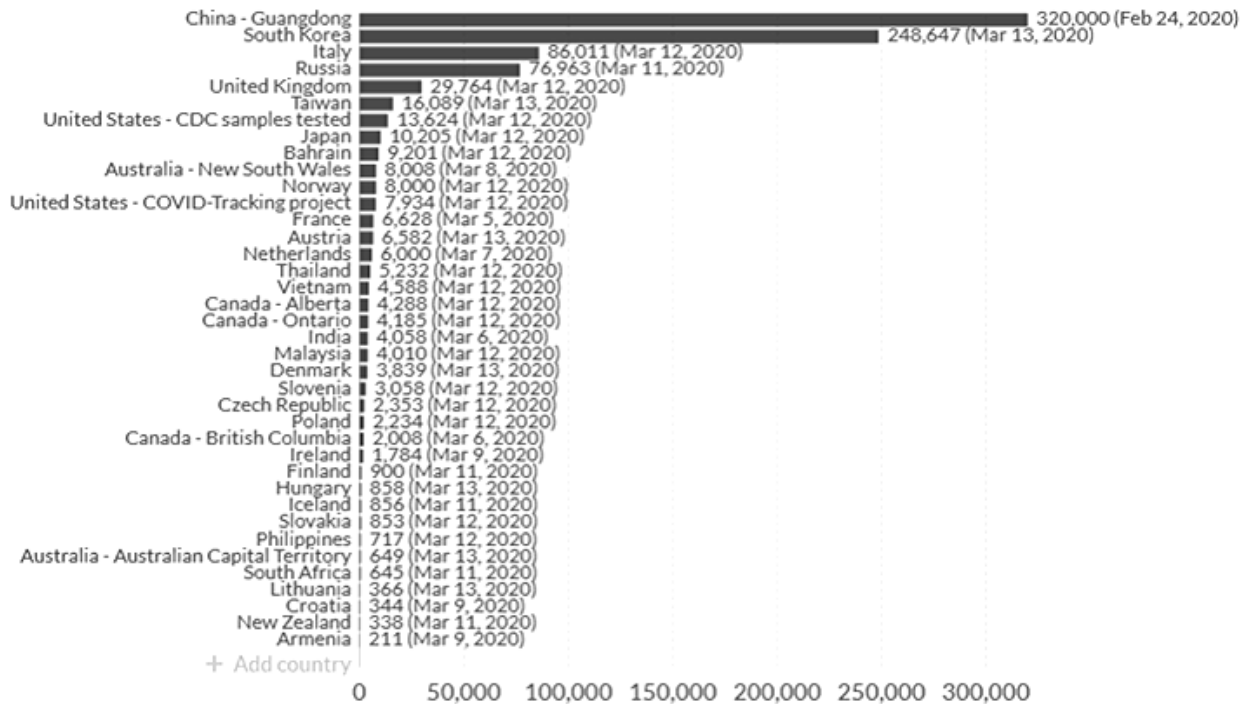
Figure 1 : Corona-like appearance of CoVID-19

CoVID-19 is not a new type of flu. It is a respiratory virus. Neither flu jabs nor antibiotics are effective against it, and so the race is on to develop a vaccine. However, as in all outbreaks of infection, questions need to be asked. Why do certain people who are exposed to a virus not develop an infection, or why do they get minor symptoms compared to others? The question of natural immunity also goes to the heart of the Vaccination debate which will no doubt increase in intensity in the wake of this virus. Children for example, do not seem to be especially susceptible to CoVID-19 and infections have been mild to date according to at least one news report ([CNN, 2020](#)). This has been confirmed by the CDC. Indeed, deaths from CoVID-19 appear to be largely but unsurprisingly among the elderly, those with comorbidities and the immunocompromised ([Begley, 2020](#)).

## Total COVID-19 tests performed by country

Most recent data available from official sources as of 13 March 2020 - 9.00GMT

Our World  
in Data



Source: Our World in Data based on official country reports

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Figure 2: Confirmed cases (WHO, March 13th 2020)

For the majority of cases reported so far, the majority are recovering. According to [John Hopkins](#), of the 200,000 or so confirmed cases around the globe at the time of writing, over 80,000 have recovered. Fatalities are 3.4%, according to [Time](#). On the face of it, the response to the outbreak could appear to be alarmingly disproportionate based on the available statistics. Part of the problem is that testing facilities are limited (and possibly flawed if we accept Crowe's analysis) so it is difficult to be accurate with the statistics. We don't really know how many people are infected, while many people who have reasonable host immunity may carry the disease but be asymptomatic.

The World Health Organization only recently elevated CoVID-19 to the status of *Pandemic* ([WHO, 2020](#)). This has led to further stock market crashes as the level of uncertainty continues and the danger of global recession is only adding to the uncertainty. There is certainly a pandemic, and it appears to be based more on fear and uncertainty than actual facts.

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# SIGNS AND SYMPTOMS OF COVID-19

The symptoms of CoVID-19 include shortness of breath, an unproductive cough and an elevated temperature, all of which may mimic many other infections such as the cold and flu which are also especially prevalent at this time of year. The condition can also affect the gut. It can later create the conditions for the onset of secondary bacterial infection and pneumonia. Indeed, the majority of fatalities are actually from pneumonia and not CoVID-19 per se ([Wang et al., 2020](#)).

It is thought that CoVID-19 is spread by respiratory droplets in the air. It can also be viable on surfaces for up to 4 hours, though further research is needed to confirm this.

The incubation period is 24 days, which is significantly longer than the 14 days associated with most other corona viruses ([Wang et al., 2020](#)), while some government guidelines are still suggesting 7 days! If you suspect you have these symptoms you are advised to stay at home to avoid spreading the condition to others for the duration of the incubation period. You should contact the appropriate health authority in your country for advice ([PHA, 2020](#)).

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# HERBAL MEDICINE

While all the talk continues to centre around a vaccine, there has unsurprisingly been little said of the potential of herbal medicine in treating CoVID-19. Herbalists have a number of anti-viral herbs at their disposal, as well as many other botanical agents to help enhance respiratory function and boost the immune system. The choices of herbs we might make would depend on what we know about CoVID-19, despite the research being still in its infancy. There are also several cases in Japan and China of re-infection after recovery, but these have not been confirmed. Indeed, Crowe's article mentioned earlier offers an opinion on this which is worth considering.

There are major similarities between these three corona viruses, SARS, MERS and CoVID-19 (Hosseiny et al., 2020).

First of all, from a herbal medicine perspective any antiviral herb will not suffice. Only agents which have evidence against corona-viruses in particular might be considered as possible treatments until we know more. We can take a lead from those agents which were used during the recent SARS and MERS outbreaks. For example, in vitro research found that Cinnamon cortex (*Cinnamomum zeylanicum*) demonstrated anti-viral activity in SARS (Zhuang et al., 2009). Other promising herbal agents against SARS in vitro include *Coptis chinensis* and *Phellodendron spp* (Kim et al., 2008). However, this is in vitro research and has obvious limitations. But there have been a number of clinical trials on SARS involving Chinese herbal medicines (Fung et al., 2011; . Li et al., 2006; Lau et al., 2005; Zhang et al., 2003; Bian et al., 2003), providing possible leads.

**TABLE 1: Comparison of Clinical and Radiologic Features of SARS, MERS, and COVID-19**

Feature	SARS	MERS	COVID-19
<b>Clinical sign or symptom</b>			
Fever or chills	Yes	Yes	Yes
Dyspnea	Yes	Yes	Yes
Malaise	Yes	Yes	Yes
Myalgia	Yes	Yes	Yes
Headache	Yes	Yes	Yes
Cough	Dry	Dry or productive	Dry
Diarrhea	Yes	Yes	Uncommon
Nausea or vomiting	Yes	Yes	Uncommon
Sore throat	Yes	Uncommon	Uncommon
Arthralgia	Yes	Uncommon	
<b>Imaging finding</b>			
<b>Acute phase</b>			
<b>Initial imaging</b>			
Normal	15–20% of patients	17% of patients	15–20% of patients
<b>Abnormalities</b>			
Common	Peripheral multifocal airspace opacities (GGO, consolidation, or both) on chest radiography and CT	Peripheral multifocal airspace opacities (GGO, consolidation, or both) on chest radiography and CT	Peripheral multifocal airspace opacities (GGO, consolidation, or both) on chest radiography and CT
Rare	Pneumothorax	Pneumothorax	Pneumothorax
Not seen	Cavitation or lymphadenopathy	Cavitation or lymphadenopathy	Cavitation or lymphadenopathy
Appearance	Unilateral, focal (50%); multifocal (40%); diffuse (10%)	Bilateral, multifocal basal airspace on chest radiography or CT (80%); isolated unilateral (20%)	Bilateral, multifocal, basal airspace; normal chest radiography findings (15%)
Follow-up imaging appearance	Unilateral, focal (25%); progressive (most common, can be unilateral and multifocal or bilateral with multifocal consolidation)	Extension into upper lobes or perihilar areas, pleural effusion (33%), interlobular septal thickening (26%)	Persistent or progressive airspace opacities
Indications of poor prognosis	Bilateral (like ARDS), four or more lung zones, progressive involvement after 12 d	Greater involvement of the lungs, pleural effusion, pneumothorax	Consolidation (vs GGO)
<b>Chronic phase</b>			
Transient reticular opacities <sup>a</sup>	Yes	Yes	Unknown, but pleural effusion and interlobar septal thickening have not yet been reported
Airtrapping	Common (usually persistent)		
Fibrosis	Rare	One-third of patients	Not yet reported

Note—SARS = severe acute respiratory syndrome, MERS = Middle East respiratory syndrome, COVID-19 = coronavirus disease 2019, GGO = ground-glass opacity, ARDS = acute respiratory distress syndrome.

<sup>a</sup>Over a period of weeks or months.

**Figure 3:** Similarities and differences in corona viruses ([Hosseiny et al., 2020](#))

The herb *Sambucus formosana*, a variety of Elder, shows promise against CoVID-NL63 – a related coronavirus which causes Adult Respiratory Distress Syndrome. This activity from an ethanolic extract seems to be derived from the polyphenols caffeic acid, chlorogenic acid and gallic acid ([Weng et al., 2019](#)). Another study involving *Sambucus nigra* found the herb may inhibit replication of other coronaviruses ([Chen et al., 2014](#)).

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# THE CONSIDERATION OF BIOFILM

Researchers have shown that certain viruses are capable of forming complex biofilms, similar to bacterial biofilms. It has been difficult to find data on whether or not CoVID-19 forms a biofilm. These extracellular infectious structures may protect viruses from the immune system and enable them to spread more efficiently from one cell to another. Viral biofilm would appear to be a major mechanism of propagation for certain viruses (Thoulouze and Alcover, 2011). This is an important consideration because biofilms can inhibit treatment. Earlier work into coronavirus expression and genome was conducted at a time when biofilms were relatively unknown (Lai, 1990).

Research into the coronavirus envelope protein suggests the CoV envelope protein is a small, integral membrane protein involved in several aspects of the virus' life cycle, such as assembly, budding, envelope formation, and pathogenesis (Schoeman and Fielding, 2019). While more research is necessary here, we do know that the later stages of infection involve pneumonia in which biofilms are certainly involved, and which is also why pneumonia can be terminal (Bosch et al., 2013).

Biofilms offer a protective barrier to colonies of bacteria and viruses, and it is for this reason that we might consider using agents which are known to deactivate biofilms. Volatile oils from Cinnamon, Oregano and Thyme have demonstrated anti-biofilm activity (Kerekes et al., 2019).

Berberine-containing herbs (*Berberis vulgaris*, *Coptis chinensis* etc) may also be useful and it may be worth considering these as part of a treatment strategy.

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# PREVENTION IS BETTER THAN CURE

If we can understand how CoVID-19 establishes itself, we might then consider strategies to inhibit it. Very recent research has determined that the receptor binding domain of CoVID-19 is angiotensin converting enzyme 2 (ACE2) receptors in lung cells via spike proteins on the surface of the virus ([Chen et al., 2020](#)). This is also the very same receptor site of MERS and SARS ([Li et al., 2003](#)). ACE2 is predominantly expressed in the intestines, testis, and kidney, faecal-oral so other routes of transmission may also be possible besides the lungs, according to the authors. The authors conclude that molecular inhibitors that can block the interaction of ACE2 with the receptor binding domain should be developed to combat the virus.

There are a number of botanicals that can down regulate ACE2 expression ([Patten et al., 2013](#)). *Curcuma longa* (Turmeric) demonstrates ACE inhibition ([Zhang et al., 2019](#)). *Cynara scolymus* (Artichoke) also has a notable influence on ACE expression ([Khan and Kumar, 2019](#)). Other in vitro research shows significant and promising ACE inhibition for *Apium graveolens* (Celery Seed) ([Simartanamongtol et al., 2014](#)). *Tribulus terrestris* (Puncture Vine) is also active in down-regulating ACE ([Somanadhan et al., 1999](#)). This concept could help in the development of prophylactic botanical strategies.






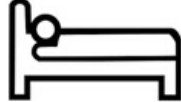
Of course, enhancement of general immunity and antiviral activity using mushrooms such as *Ganoderma lucidum* ([Linnakoski et al., 2018](#)); *Cordyceps sinensis* ([Ramberg et al., 2010](#)) or *Coriolus versicolor* ([Saleh et al., 2018](#)) has already been long established in traditional use. Used in combination with immunomodulating herbs which stabilise mast cells, such as *Astragalus membranaceus* (Astragalus) or *Scutellaria baicalensis* (Baical Skullcap) would be a potentially useful strategy. This is particularly important as mast cells play a major role in coronavirus inflammation ([Kritas et al., 2020](#)). Vitamin D3, vitamin C and zinc might be important adjuncts here.

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The above herbs might also be useful if the infection is active. Combating inflammation by checking cytokine expression will also be central to reducing the severity of the disease ([Chen et al., 2020](#)). There are many anti-inflammatory herbs at our disposal which can act as a check to accelerated cytokine expression and inflammation such as *Curcuma longa* ([Sciberras et al., 2015](#)) and *Hypericum perforatum* which can down-regulate mRNA expression of IL-6 and TNF- $\alpha$  ([Chen et al., 2019](#)).

Good hygiene is one of the major protocols to prevent the spread of infection. Hand-washing with hot water and soap is superior to the use of hand-sanitizers.

### Coronavirus prevention

-  Wash your hands often with soap and water for at least 20 seconds. If soap and water are not available, use an alcohol-based hand sanitizer.
-  Avoid touching your eyes, nose, and mouth with unwashed hands.
-  Cover your cough or sneeze with a tissue, then throw the tissue in the trash.
-  Avoid close contact with people who are sick.
-  Clean and disinfect frequently touched objects and surfaces.
-  Stay home when you are sick.

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Please check information in your area for other tips and suggestions.



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# HERBAL FORMULATIONS

There are a number of herbs which could prove to be useful, along with those already discussed. These are herbs known to be active against coronaviruses. *Glycyrrhiza glabra* has notable antiviral activities ([El-Saber et al., 2020](#)). A number of other herbal antivirals, including *Sambucus nigra* and *Hypericum perforatum* have been flagged in a recent systematic review ([Akram et al., 2018](#)). Several herbal medicines have antiviral activity but we need to differentiate with those that have specific antiviral activity against coronaviruses. Of these, *Artemisia annua* and *Isatis indigotica* may be pertinent ([Line et al., 2014](#)). *Echinacea angustifolia* may also be worthy of consideration in evolving strategies against coronaviruses ([Hudson and Vimalathan, 2011](#)). In particular, herbs which have shown activity against SARS and MERS include *Artemisia annua*, *Lycoris radiata* and *Pyrrosia lingua* ([Li et al., 2005](#)). Of these herbs, *Artemisia annua* is widely available.

Much of this new information has not been fully evaluated through systematic research. However, the search for a vaccine is many months if not years away. We must also consider that any potential vaccine may have other limitations and issues. The relative safety and cost-effectiveness of herbal medicines available to us now is considerable.

Recently in silico research in China has catalogued 125 herbs with potential against CoVID-19 ([Zhang et al., 2020](#)). Researchers in China have also claimed that a TCM formula known as [Shuanghuanglian](#) can inhibit the virus. Shuanghuanglian includes *Lonicera japonica*, *Forsythia spp* and *Scutellaria baicalensis* all of which have long traditional use in respiratory infections. The authors are calling for prospective, rigorous population studies to confirm the potential preventive effect of certain TCM formulas ([Luo et al., 2020](#)).

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The following formulations were passed on to me by David Winston. They are reports coming from Wuhan in China where the outbreak first surfaced, as well as TCM experts from across China, based on the energetic concepts of Traditional Chinese Medicine. The herbs are followed by the amounts in parts and rationale. Unfortunately, many of these herbs are not widely available in Europe, though some of them are and could be considered in developing protocols.

## **Hubei Academy of TCM: Formula for Coronavirus**

Wuhan, Hubei Province

Mechanism – Reduce Heat and Damp and toxins in Lungs

Each batch is for one day. Cook into a soup; divide into 3 doses per day

***Bupleurum chinensis*** – harmonize interior and exterior (20)

***Scutellaria baicalensis*** – drain heat from lungs (10)

***Pinellia ternata*** – dries up mucus, reduces cough (10)

***Codonopsis pilosula*** – strengthens digestion (15)

***Trichosanthes kirilowii*** – reduces cough, mucus, heat (10)

***Areca catechu*** – reduces gas and bloating (10)

***Lanxangia tsaoko*** – removes phlegm, cold and dampness (15)

***Magnolia officinalis*** – dries up dampness (15)

***Anemarrhena asphodeloides*** – reduces fever and thirst (10)

***Paeonia lactiflora*** – nourish blood and calms liver (10)

***Glycyrrhiza glabra*** – harmonizes formula (10)

***Citrus reticulata*** – regulates spleen qi, reduces cough (10)

***Polygonum cuspidatum*** – clears heat and toxins (10)

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## Sichuan Academy of TCM Formula for Coronavirus

Chengdu, Sichuan Province

### Formula 1 (one of 4 formulas)

Mechanism – Reduce Heat and Damp in Lungs

Each batch is for one day. Cook 15 minutes in 150 ml water, divide into 4 doses per day.

***Lonicera japonica*** – reduces heat and wind in lung (30)

***Forsythia suspensa*** – reduces heat and toxins in lung (30)

***Schizonepeta tenuifolia*** – release exterior and expel wind (15)

***Mentha haplocalyx*** – disperses wind and heat (15)

***Arctium lappa*** – reduces lung and throat heat, opens lungs (15)

***Platycodon grandiflorum*** – expels phlegm and cough (30)

***Prunus armeniaca*** – reduces cough (15)

***Agastaches rugosa*** – reduces dampness (15)

***Magnolia officinalis*** – dries up dampness (15)

***Poria cocos*** – strengthens spleen, reduces dampness (30)

***Pinellia ternata*** – dries up mucus, reduces cough (15)

***Coptis chinensis*** – drains fire (30)

***Amomum subulatum*** – reduces dampness stops vomiting (15)

***Dolichos lablab*** – tonifies spleen and reduces vomiting (30)

***Crataegus pinnatifida*** – strengthens heart, stops diarrhoea (30)

***Massa medicata-fermentata*** – strengthens digestion (15)

***Phragmites communis*** – removes lung heat, nourishes lung Yin (30)

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## TCM Formula for Coronavirus

This report was published in *China Daily*, from the **Chinese National Health Department** and the **Traditional Chinese Herbs Administration**.

The formula is called *Clear Lung Toxins Formula*, and was created by a panel of TCM experts from 4 provinces. It was tested on 214 patients, and 90% improved.

### Clear Lung Toxins Formula

***Ephedra sinica*** – anti-asthma, reduces cold (**9 grams**)

***Glycyrrhiza glabra*** – harmonizes formula (**6 grams**)

***Prunus armeniaca*** – reduces dry cough (**9 grams**)

***Cinnamomum cassia*** – disperses meridian congestion (**9 grams**)

***Alisma plantago-aquatica*** – diuretic, drains dampness (**9 grams**)

***Polyporus umbellatus*** – drains dampness (**9 grams**)

***Atractylodes lancea*** – strengthens digestion (**9 grams**)

***Poria cocos*** – diuretic, digestive & immune tonic (**15 grams**)

***Bupleurum chinensis*** – calming liver tonic (**16 grams**)

***Gypsum fibrosum*** – reduces heat (**15-30 grams**) – less if low fever, more if high fever

***Scutellaria baicalensis*** – reduces liver inflammation (**6 grams**)

***Pinellia ternata*** – dries up mucus, help digestion (**9 grams**)

***Zingiber officinalis*** – digestive, reduces nausea (**9 grams**)

***Tussilago farfara*** – stops wheezing caused by cold (**9 grams**)

***Aster tataricus*** – reduces phlegm, stops chronic cough (**9 grams**)

***Belamcanda chinensis*** – strongly reduces mucous (**9 grams**)

***Asarum sieboldii*** – reduces pain, disperses coldness (**6 grams**)

***Dioscorea opposita*** – nourishes Yin (**12 grams**)

***Citrus aurantium*** – opens bowels (**6 grams**)

***Citrus reticulata*** – anti-allergy, regulates spleen qi (**6 grams**)

***Agastaches rugosa*** – stops nausea, anti-mucus (**9 grams**)

**DOSE:** 9 grams in hot water taken twice a day.

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# POTENTIAL WESTERN HERBAL FORMULAS

The following tincture formulae are based on my own clinical experience of treating respiratory infections as well as the research mentioned in this paper but also because most of these herbs are easily obtainable to the Western Herbal Medicine practitioner. There are many possible options but attention to formula energetics and individualization of strategy according to symptom patterns and co-morbidities will be fundamental.

## Prophylactic Formula

Intended to help prevent the condition, but may also be helpful in early stages of symptoms.

**Dose:** 5ml TID

***Isatis tinctoria*** - (25ml)

- active against coronaviruses ([Yang et al., 2013](#))

***Echinacea angustifolia*** - (20ml)

- immune support and viral inhibition ([David and Cunningham, 2019](#))

***Apium graveolens*** - (10ml)

- ACE2 downregulation ([Simartanamongtol et al., 2014](#))

***Urtica dioica*** - (15ml)

- may inhibit viral replication ([Flores-Oceloti et al., 2018](#))

***Inula helenium*** - (10ml)

- antimicrobial, traditional use in related species ([Kayani et al., 2014](#))

***Glycyrrhiza glabra*** - (10ml)

- anti-corona viral, soothing to dry lungs ([El-Saber et al., 2020](#))

***Allium ampeloprasum*** - (10ml)

- antimicrobial and antioxidant ([Jalian et al., 2020](#))

Despite the clinical evidence, many of these herbs have long traditional use. As well as the suggested indications these herbs will have many other activities and synergies as every good herbalist knows.

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The following formulae could be considered if the disease is **active**. These formulas also take a multi-spectrum approach as above with anti-viral, immuno-modulating and anti-inflammatory activity. There are many other herbs and possible combinations.

**Suggested dosage:** 5ml TID (2-3ml in elderly populations and 1-2ml in children over 18 months) for the following formulas.

### **ACTIVE FORMULA 1**

*Artemisia annua* - 20ml  
*Sambucus nigra folia* - 20ml  
*Curcuma longa* - 15ml  
*Ganoderma lucidum* - 20ml  
*Lonicera periclymenum* - 10ml  
*Scutellaria baicalensis* - 10ml  
*Andrographis paniculata* - 5ml

### **ACTIVE FORMULA 2**

*Plantago major* - 20ml  
*Chondrus crispus* - 20ml  
*Arctium lappa* - 20ml  
*Bupleurum chinense* - 15ml  
*Grindelia robusta* - 10ml  
*Tussilago farfara* - 10ml  
*Allium sativum* - 5ml  
*Glycyrrhiza glabra* - 5ml

### **ACTIVE FORMULA 3**

*Astragalus membranaceus* - 20ml  
*Forsythia suspensa* - 15ml  
*Olea europea* - 15ml  
*Pelargonium sidoides* - 10ml  
*Hypericum perforatum* - 10ml  
*Thymus vulgaris* - 10ml  
*Berberis vulgare* - 10ml  
*Tabebuia impetiginosa* - 5ml  
*Cinnamomum zeylanicum* - 5ml

Other herbs can of course be added or subtracted depending on the individual presentation and symptom picture. *Tussilago farfara* should not be used with children, during pregnancy and breastfeeding or in liver disorders.

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# ADJUNCT ADVICE

**There are many things that can be done to boost the immune system as adjunct advice.**

**Vitamin D3** – 50,000 IU initially if disease is active, reduce to 2000 IU as symptoms improve

**Liposomal vitamin C** – dose 5ml every 2 hours

**Beta glucans** capsules/or **Medicinal mushrooms** that have been decocted before drying

**Resveratrol** – 500mg daily

**Co Enzyme Q10** – Ubiquinol 3000mg daily

Regular inhalation of essential oils of Cinnamon, Oregano, Eucalyptus, Peppermint and Ginger

Cooling diaphoretic infusions should be taken freely. These should be brought to the boil and then allowed to cool before consumption.

## **Conclusions**

I hope these notes provide useful information going forward, particularly in light of some information I have seen to date! Please send this information to other herbal practitioners. I'd be happy to hear comments and other contributions from the wider herbal community.

**March 18th 2020: Danny O'Rawe ND, MSc FIRH**

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