

# Viral Combination

## Description

Viruses are one of the organisms that pose a threat to our health, however they cannot overtake a healthy immune system. Once they have attacked their host, there are natural substances which are known to combat them and to keep them away.

## Clinical Applications/Research

- Any viral infections (i.e. herpes, Epstein Barr virus, etc.)
- Immune enhancement
- Antibacterial infections

## Nutrient Applications

### **Elderberry Extract**

Elderberry extract is high in phytochemical content, especially proanthocyanidins, which have potent cell-protecting ability. Elderberry has been used traditionally for its antiviral effects.

### **Scutellaria Baicalensis (Chinese Scullcap)**

Chinese Scullcap is from the mint family and is grown in China and Russia. It is not the same as American Scullcap. Chinese Scullcap contains flavonoid compounds which have been shown to inhibit the replication of human influenza viruses A and B (Nagai T, et al, Anti-viral activity of plant flavonoid 5,7,4'-trihydroxy-8-methoxyflavone from the root of *Scutellaria baicalensis* against influenza A and B viruses. *Boil Pharm Bull* 1995 Feb;18(2):295-9). Chinese Scullcap has also demonstrated inhibition of viral proliferation in lab animals and in vitro replication of HIV (Li BQ, et al, Inhibition of HIV infection by baicalin-a flavonoid compound purified from Chinese herbal medicine. *Cell Mol Biol Res* 1993;39(2):119-24). Chinese Scullcap has been shown to inhibit replication of Epstein-Barr virus and associated tumor development (Konoshima T, et al, Studies on inhibitors of skin tumor promotion. XI. Inhibitory effects of flavonoids from *Scutellaria baicalensis* on Epstein-Barr virus activation and their anti-tumor-promotin activities. *Chem Pharm Bull (Tokyo)* 1992 Feb;40(2):531-3). Chinese Scullcap has also exhibited in vitro inhibitory activity against a broad range of bacteria, including: *Staphylococcus aureus*, *Corynebacterium diphtheriae*, *Pseudomonas aeruginosa*, *Streptococcus pneumoniae*, and *Neisseria meningitides* (Kee Chang Huang, *The Pharmacology of Chinese Herbs*, NY:CRC Press, 1999:385-6).

### **Propolis**

Propolis is the "bee glue" or natural resinous product gathered from under the bark of certain trees and used by the bees as a filler to repair the cracks in their hives. This slightly aromatic resin is important in the defense of the hive. A high content of bioflavonoids and amino acids as well as several trace minerals, such as copper, magnesium, silicon, iron, manganese and zinc contribute to the health benefits of propolis. Propolis is also a good source of the B-vitamins, beta carotene and vitamins C and E. Research has shown propolis to have strong antimicrobial properties. It has been used in early folk medicine as a medicinal and also a cosmetic. Its benefits as an antiinflammatory and wound healing preparation have been recorded as early as 300 BC. Propolis builds the immune system and increases the body's natural resistance to infection.

### **Astragalus**

Astragalus has been traditionally used by the Chinese to fight viral infections. A clinical trial with 10 patients suffering from a coxsackie B viral infection showed improved natural killer cell activity in patients treated with astragalus (*Chin Med J* 1990;103:304-307). Research has demonstrated an ability of astragalus to correct deficient T cell (immune-fighting cells) function in cancer patients (*J Clin Lab Immunol* 1988;25:119-123).

### **Isatis Root**

Isatis exhibits broad-range antibacterial effects against *Shigella*, *Salmonella* and hemolytic *Streptococcus*. Isatis has been shown to increase spleen weight and the numbers of peripheral white blood cells in lab animals (Xu YM and Lu

PC, Experimental studies on immunostimulatory effects of the Isatis indigotica polysaccharide. Chung Hsi I Chieh Ho Tsa Chih 1991 Jun;11(6):357-9, 325-6). Traditional Chinese medicinal indications include dissipating heat, alleviating fire toxicity and cooling the blood.

### **Coptis Chinensis Extract**

In Traditional Chinese Medicine, Coptis has been used to treat many infectious diseases. Coptis is high in berberine content. Berberine has been shown to be helpful in bacterial, fungal and viral infections. Berberine sulfate and Coptis rhizome have demonstrated significant in vitro antimicrobial activity against a wide range of bacterial, fungal, and protozoal micro-organisms, including Klebsiella, Clostridium, Pseudomonas, Proteus, Salmonella, Shigella, Staphylococcus, Streptococcus, Vibrio, Candida, Cryptococcus, and Entamoeba species (Amin AH, et al, Berberine sulfate: antimicrobial activity, bioassay, and mode of action. Can J Microbiol 1969 Sep;15(9):1067-76., Bensky D, Gamble A, Kapchuk T. Chinese Herbal Medicine: Materia Medica, Revised Edition. Seattle: Easrland Press, Inc., 1993, p78). Berberine and Coptis inhibit the in vitro growth of a number of Candida species (Nakamoto K, et al, Effects of crude drugs and berberine hydrochloride on the activities of fungi. J Prosthet Dent 1990 Dec;64(6):691-4).

### **Hypericum Perforatum (St. John's Wort)**

Antiviral activity of hypericin and pseudohypericin has been demonstrated against herpes simplex virus types 1 and 2, influenza types A and B, vesicular stomatitis virus, and Epstein Barr virus. Two possible mechanisms to explain this antiviral activity were 1. Intact virions from infected cells may be inhibited from assembling or processing, and 2. Mature and properly assembled retroviruses may be directly inactivated by these compounds. References: Muldner VH & Zoller M. Arzneimittel-Forsch 1984;34:918; Lavie D. Antiviral pharmaceutical compositions containing hypericin or pseudohypericin. European Patent Application No. 87111467.4, filed 8-8-87, European Patent Office. Publ No: 0256 A2.175-177, 1987.

### **Licorice Root**

In China, licorice is called, "the great detoxifier," and is thought to drive poisons from the body (Ody, P. The Complete Medicinal Herbal 1993. Dorling Kindersley Ltd, London). Licorice is valued as a base ingredient in herbal remedies, because of its ability to help focus the purpose and direction of other herbs, as well as attenuate the harsh properties of other herbs (Landis R. Herbal Defense. 1997. Warner Books. NY, NY). Adrenal insufficiency is treated well with licorice because of the constituents that resemble the adrenal corticoid hormones. Licorice enhances immune activity, is good for digestion, is a lung tonic and energizer, reduces spasms, decreases inflammation, and has a laxative effect (ibid).

### **Zinc**

Zinc is another important immune vitamin. It has a vital role in regenerating epithelial tissue and so is highly important when viral infection calls for cellular repair. Zinc shortens colds and reduces symptoms, theoretically by inhibiting viral replication (Landis R. Herbal Defense. 1997 Warner Books, NY, NY).

Zinc is also a cofactor for over 20 enzymes, including a potent free radical-scavenging enzyme. The New England Journal of Medicine reported that zinc probably works by enhanced immunologic mechanisms for the clearance of infection, enhancing cellular immunity and increasing levels of secretory antibodies (NEJM. Sept. 28, 1995. 333(13):839-844.p. 842).

### **Contraindications/Toxicology**

Contraindicated in pregnancy. Licorice should be used with caution in hypertensive patients. If blood pressure rises, discontinue use. Medicinal amounts of any vitamin, mineral, herbal or specialty nutrient should only be taken with the advice of a licensed healthcare professional.

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