

## The Role of Herbal Adaptogens for Human Immuno-deficiency Virus (HIV), Cancer and Chronic Illness

There is a legitimate role for the use of both herbal medicines and allopathic (prescription) drugs in the health maintenance and treatment of individuals with HIV, AIDS, cancer and chronic illness. Although some research has been conducted specifically on herbal medicine and HIV, most available data discusses the benefit plant medicine has on general immune system enhancement.

The hectic pace of North American living, emotional stress, poor nutrition and dis-ease can cause our bodies to over function in an attempt to maintain health; extended stress over time can lead to exhaustion and increased susceptibility to further illness. Just as we interact with our environment, and that interaction has an impact on our spirit, emotional and physical health; plants are also live beings that interact with the world around them. When used as medicine, botanicals can impact our current state of health, provide nourishment in conditions of depletion, potentate our bodies natural anti viral mechanisms and can assist in keeping HIV under control and asymptomatic.

Herbs that contain balancing, regulative and tonic properties are known as adaptogens. Some adaptogen herbs include, but are not limited to: Siberian Ginseng -the Latin name in parenthesis (Eleutherococcus senticosus), the ancient Chinese herb, Huang Qi (Astragalus membranaceus) and Medicinal Mushrooms such as Reishi (Gandoderma lucidum) and Maitake (Grifola frondosa).

Adaptogens, or 'harmony-restoring agents', are of particular importance for supporting the health of individuals with HIV, AIDS, cancer, autoimmune disorders and chronic illness. The term adaptogen is a Russian concept - based on the daily use of herbs for prevention of disease and enhancement of health; numerous clinical studies have been conducted on herbal adaptogens since the 1950's.

Adaptogen herbs are used to increase physical and mental endurance, boost vitality and help the body cope with stress, improve resistance to infection and enhance immune system function, their balancing actions help maintain optimal organ function within the body and can be used in conjunction with allopathic medicine (prescription medicine), often minimising side effects caused by many drugs

### **Eleutherococcus senticosus**

Siberian ginseng root is not really a true ginseng, but was given its name due to its many ginseng like 'adaptogenic' properties. Extensive clinical research shows that Siberian Ginseng assists the bodies' response to stress by supporting the adrenal glands and modifies the physiological response to stress, supporting exhaustive states and overwork. It is a useful tonic to the elderly and can improve endurance and stamina in conditions of chronic disease. Animal experiments suggest that Eleutherococcus offers many balancing actions to both hyper and hypoglycaemia and can be used for both hypertrophy and atrophy of the adrenal glands.

Siberian Ginseng offers support in cancer therapy, helping to prevent secondary infection and improve the bodies' ability to withstand the negative side effects of drug therapies used in conventional medical treatment. According the scientific text, Natural Compounds in Cancer Therapy by John Boik, it appears that Eleutherococcus can inhibit cancer activity through several mechanisms: by both inhibiting angiogenesis (the formation and differentiation of blood

vessels) by reducing histamine availability and may block cancer cell proliferation by inhibiting cyclin dependent kinases (intracellular signals which play a role in cancer cell division).

Side effects of Siberian Ginseng are limited and most experienced when using a very high dose. Occasionally symptoms similar to ingesting an excess of caffeine may be experienced -feelings of anxiety, insomnia, rapid heartbeat, palpitations and hypertension has been occasionally noted.

### **Astragalus membranaceus**

Astragalus is a member of the Leguminosae (pea) family, some active constituents include triterpenoid saponins, flavonoids and immune stimulating polysaccharides. Commonly used in Traditional Chinese Medicine, Astragalus can support and maintain the bodies' immune function, increasing interferon levels, T cell count, and natural killer cell activity and reducing symptoms of nausea. Animal studies confirm the adaptogenic properties, enhancing endurance and promoting weight gain. Grouped in a category of herbs known as antiviral, anti bacterial and immune stimulants, Astragalus can help inhibit HIV replication in infected cells and prevent secondary infections.

The text, Principles and Practices of Phytotherapy, by Simon Mills and Kerry Bone review studies conducted on individuals with chronic viral hepatitis, in most cases, the serum GPT levels (glutamic pyruvic transaminase - one of many tests used to identify liver disease) returned to normal after 1-2 months of using Astragalus. In vivo and in vitro experiments show protective qualities against drug and chemically induced liver damage due to the triterpenoid saponins found in the plant. Although in vitro and in vivo studies do not present a true picture of how an herb works in a human, they do, in this case, confirm century old traditional applications. Astragalus is not recommended during short-term acute conditions; however no adverse reactions have been noted with use in pregnancy or lactation.

### **Medicinal Mushrooms**

Medicinal mushrooms such as Reishi (*Ganoderma lucidum*) and Maitake (*Grifola frondosa*) play an important role in maintaining healthy immunity in individuals with HIV. All medicinal mushrooms contain a compound called beta glucans, a complex polysaccharide, containing adaptogenic and immunostimulant properties found to:

- Support components of cellular immunity: Stimulate interferon production, increase natural killer cell activity and has been found (in animal studies) to stimulate macrophage activity
- Contain chemical substances that inhibit viral, bacteria, and fungal infections specifically benefiting oral and genital herpes, warts, shingles, viral hepatitis and candida.

The immune system is the first line of defence against infection. When the immune system is impaired bacteria, fungi and viruses have free reign in the body; cancer cells and other opportunistic infections have occasion to develop. Conventional treatment often includes broad-spectrum antibiotics, to keep microbes in check; however medicinal mushrooms can also offer increased protection from infection.

Natural Killer Cells: are trained to kill viral infected cells

Macrophages: immune system scavengers that destroy foreign invaders, they also produce interferon.

Interferon: produced by T lymphocyte cells, cell messengers and a communication link between the immune system and the rest of the body

## **Grifola frondosa**

Grifola frondosa or Maitake is one of the most precious and expensive mushrooms of Japan. Animal studies have found that Maitake stimulates interferon 1 by increasing macrophage activity. (Interferon 1 stimulates T cell division therefore assists in increasing anti bacterial troops in the body). Research conducted on Maitake shows that it offers protection from opportunistic infection; while providing anti tumour, anti fungal, anti HIV and anti hepatitis activity. The chemical constituents lectins, saponins, polyacetylenes and organic acids contain direct anti bacterial properties and also enhance the activity of the immune system, stimulating macrophage activity, which function to engulf and destroy foreign bacteria. When taken in conjunction with Vitamin C, the medicinal actions of this remarkable mushroom are enhanced.

## **Gandoderma lucidum**

Known as the mushroom of immortality in the orient, Reishi or Ling-zhi, was used for centuries as an adaptogen herb to enhance deficiencies in vital energy and strengthen the bodies' resistance to physical, mental and environmental stressors. A longevity tonic, Reishi has been used to improve resistance to physical stress, enhance stamina, reduce fatigue and treat insomnia. The replenishing effects on the nervous system make this medicinal mushroom a nourishing food for auto immune disorders including chronic fatigue syndrome, viral infections and fibromyalgia.

Some of the main chemical constituents in the plant include triterpenes (ganodermic acids) and germanium, two free radical scavengers, which inhibit histamine release, therefore reducing allergy symptoms and asthma. Individuals with poor immune function and susceptibility to respiratory infections will find enhanced recovery rates for bronchitis, pneumonia and other lung infections. Steroid components (gandosterone) in the mushroom provide liver protective properties beneficial for cirrhosis and hepatitis.

A general anti oxidant and heart tonic, helping to remove free radicals from the body, studies demonstrate Reishi can lower blood pressure by inhibiting angiotension converting enzyme (an enzyme responsible for narrowing the blood vessels in conditions of high blood pressure), reduce low density lipoproteins (LDL= bad cholesterol) and inhibit the formation of thrombi (blood clots), thus is a useful agent for treating myocardial infarction, angina and other heart concerns.

The actions of Reishi on the immune system are numerous, offering immeasurable support for individuals with HIV, AIDS and other conditions of chronic illness; clinical studies conducted with Reishi recognize an increased production of leucocytes in the bone marrow, enhanced T cell activity and increased macrophage activity; in addition Reishi contains anti bacterial properties to staphylococci and streptococci bacteria (2 opportunistic bacteria). Containing anti tumor properties, the immune stimulating polysaccharides (beta D glucans), are thought to inhibit metastasis by inhibiting platelet aggregation and studies at the Japanese Cancer Society have found Reishi to be therapeutic for both sarcomas and cancer while offering additional protection during chemotherapy and radiation.

Therapeutic applications of Reishi are numerous; through support of whole body health this medicinal mushroom can enhance resistance to secondary infection and optimize both immune and nervous system function.

## Side effects of Medicinal Mushrooms

When beginning to use medicinal mushrooms, there may be short-term side effects until your body has a chance to adapt to the herb. Some adverse effects include, increased bowel movements, skin rash or constipation. These are normal signs of the mushroom excreting toxins and will disappear with repeated intake of the mushroom.

Please do not use this article to self-treat as I feel strongly that chronic conditions are best treated while under the clinical care of a practitioner trained in botanical therapies. In a clinic environment a practitioner takes into account the whole body, nutrition and concurrent prescription medication and designs a program specific to an individuals needs. Most botanical therapies are used in combination rather than singularly and when used in this manner, are most successful for treating the whole person. I hope this article can provide an overview of some adaptogens and their relevant role in the treatment and care of HIV and AIDS related conditions and whole body health.

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### References and Recommended Reading:

Schar, Douglas. "Grifola frondosa and the Human Immuno-deficiency Virus". British Journal of Phytotherapy, 1998, Vol 5, Issue 1, Pg 13-23.

Principles and Practices of Phytotherapy by Simon Mills and Kerry Bone

Reishi Mushroom: Herb of Spiritual Potency and Medical Wonder by Terry Willard

Herbal Medicine Healing and Cancer, Donald Yance

Natural Compounds in Cancer Therapy, John Boik