



# Extrax Fax

**VOL 5, No. 6**

**A FULL LINE OF BOTANICAL EXTRACTS & FORMULAS**

**SEPT., 2002**

## Immunity Boosters *Powerful Herbal Help for Cold and Flu Season*

As we ramp up for cold and flu season, we all want to be sure that we have a good host of products to offer consumers that will help them resist the latest batch of infectious bugs. Draco is well equipped with building blocks for these products, some that may be familiar, and others that may not be. Along with Echinacea and Astragalus, the medicinal mushrooms are more than worthy of mention for the wintertime medicine chest.

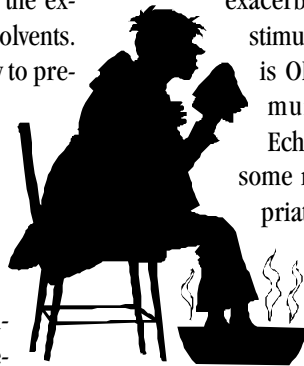
It is important to note throughout this article the overall importance of polysaccharides in promoting immune function, the full presence of which is entirely dependent on the proper water extraction techniques. Polysaccharides are generally not pulled into the extract by alcohol or other non-water solvents. Draco's process is designed specifically to preserve these valuable constituents.

### Echinacea

Echinacea is an extremely valuable herb in the herbal repertoire for immunity. It is widely used to treat colds, influenza and upper respiratory tract infections and there are mountains of research to show that it can significantly shorten the length of these conditions. In terms of sales, it has been one of the top 5 most popular herbs for at least the last 15 years.

Echinacea's specific pharmacological action is not well understood, and it is often misrepresented as an immunostimulant. It is more accurately an immunomodulator. Its primary activity is to increase the phagocytic activity of macrophages, specialized cells that actually engulf pathogenic bacteria and viruses. Antigenic material that is processed by these "pac-man" organelles is converted to a form that the body's

T helper cells can respond effectively to. Echinacea, then, assists the body's first line of general defense against pathogens, enhancing immune surveillance. To the extent that phagocytic activity is enhanced, it frees up the body's immune system to fight other infections. By helping the body eliminate the organism or neutralize its imbalancing effect on the immune system, it modulates the immune system, helping it to maintain control, thereby toning down an inappropriate immune response. Contrary to popular belief, because Echinacea is not directly stimulating the immune system, it is not contraindicated in conditions such as asthma or AIDS that can be exacerbated by immune system stimulation. However, while it is OK for those with autoimmune conditions to take Echinacea, and it may provide some relief, it is not an appropriate treatment for those serious conditions.



It is a popular notion that Echinacea is effective only during the onset of cold or flu. This is not really true. Clinical research has shown that the herb enhances phagocytosis indefinitely, an observation that falls in line with its traditional mode of usage by the Eclectic herbalists a century ago. So it is a great remedy during onset, but it continues to provide assistance over the entire course of the cold or flu.

Echinacea has traditionally been used in the form of a hydro-alcohol extraction be-

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## News

### Extrax Fax Goes Online

We are planning a transition of Extrax Fax to electronic form. There will be one more fax issue after this one. We have been publishing this monthly Draco newsletter via fax blast with (almost) regularity for the last 5 years. During that time we have witnessed a large migration of company newsletters to online form. The benefits are many. It is less costly, it saves you the paper (unless you print it) and we can send it directly to your own desktop. Best of all, we can provide links to additional information or research on specific herbs. The online edition of Extrax Fax will be called Extracts Update and will begin to appear very soon. If you would like be on our distribution list to continue receiving news and herbal education from Draco, please send your email address to the following address:

**extraxfax@dracoherbs.com**

(Your info will not be distributed to third parties.)

## People

Draco is happy to announce the recent addition of Kevin Benensohn in the position of Inside Sales Representative. Kevin comes to us with 8 years of sales experience in the nutritional supplement industry, working both for distributors and manufacturers. Most recently, he was West Coast Account Manager for Pharmachem Labs. He is also a longstanding member of PTE, IFT and DCAT. Kevin's responsibility will be to manage sales accounts primarily in the Western US and Latin America. Please join us in welcoming him to the Draco team.

cause it is thought that the lipophilic compounds that are primarily responsible for its action. It contains a group of caffeic acids, cichoric acid in particular. A group of alkaloids have shown activity. But more recently it has been shown that the polysaccharides in Echinacea also enhance its effect. In the end, the best results are obtained from an extract that represents the whole herb. Polysaccharides are, for the most part, eliminated during hydro-alcohol extraction, but are fully present in Draco's Full Spectrum standardized Echinacea extract.

### Astragalus

The root of the Chinese Milk Vetch plant, *Astragalus membranaceus*, is without a doubt one of the most powerful deep immune system builders known in the herbal kingdom. An adaptogen, it enhances, tonifies and balances immunity on multiple levels and is useful for supporting health in both acute and chronic conditions, such as cold and flu, and even in more serious conditions like AIDS Related Complex, viral hepatitis, E3 virus infections, myasthenia gravis, and cancer.

Astragalus literally creates a comprehensive defensive front, stimulating every phase of immunity in the body. Administration of the herb was shown to significantly increase levels of undifferentiated stem cells in the blood, and in the bone marrow where they are produced, and to stimulate their differentiation into "immune competent" cells. It was then shown to increase the activity of these immune competent cells to a heightened state. For example, Astragalus was found to completely restore the immune functioning of the blood of cancer patients in vitro, an activity attributed to its polysaccharide content. It was shown to increase the cytotoxicity of pathogenic cells by the body's Natural Killer cells 5 to 6 fold. The herb also works by inducing the increased production of natural interferon, then working synergistically with the interferon to combat viral infections. Dramatic effects have been shown in ameliorating the effects of chronic hepatitis. Similar to Echinacea, Astragalus was found to increase the phagocytic activity of macrophages. Other studies have found that Astragalus enhances cellular metabolism,

promoting growth and longevity of individual cells.

The wide ranging effects of Astragalus on immunity are attributable to its full spectrum of constituents. Considered important are the triterpenoid saponins called Astragalosides I through VIII, alpha-glucans and other large molecular weight polysaccharides, isoflavones, amino acids, and minerals. Because so many constituents are vital to the efficacy of this powerful herb, a water based Full Spectrum extraction is essential.

### Medicinal Mushrooms

Several species of mushroom have been found to be very powerful immunity enhancers. Mushrooms are rich in polysaccharides, the most valuable being highly branched, high molecular weight polysaccharides with beta glucan branch linkages. Some species also contain protein bound polysaccharides that help boost the body's immune response by harmlessly impersonating a pathogen. Traditional Chinese Medicine practitioners have been wisely using these fungi for centuries in immunity building soups, but in our increased efforts to treat conditions like cancer and AIDS, they are now emerging as powerful agents that are clinically validated in scientific studies.

### Reishi Mushroom

Called ling zhi or "spirit plant" in Chinese, Reishi (*Ganoderma lucidum*) has a veritable cornucopia of beneficial effects on the human metabolism. It's antibiotic, anti-inflammatory, antioxidant, antitumor, hypotensive, cardioprotective, anti-allergy, and anti-HIV, just to name a few. In terms of immunity, Reishi is an immunopotentiator, increasing production of interleukins 1 and 2, inducing interferon production, enhancing natural killer (NK) cell activity, enhancing bone marrow production, and protecting the liver. A plethora of research backs up the reasons that this herb should be present in virtually everyone's cupboard.

### Maitake Mushroom

This Japanese "dancing mushroom" is rich in the famous D-fraction beta-glucan polysaccharide. The intravenous form of D-fraction has been shown to dramatically reduce tumor size in cancer patients. The whole mushroom taken orally increases the activity of macrophages, NK cells, and cytotoxic T cells, all critical components of effective immunity.

### Shiitake Mushroom

Volumes of research support the ability of this mushroom to inhibit cancer, specifically by enhancing and regulating both humoral and cellular immunity. Lentinan, an important polysaccharide constituent from the cell wall, is a giant triple helix molecule with a molecular weight of a million, made up of only glucose, but intricately designed with many beta D glucan linkages. Lentinan was found to enhance production of antibodies, colony stimulating factor, interferon, and interleukin 1. It was also shown to activate NK cells, helper T and killer T cells, as well as macrophages.

### Turkey Tail Mushroom

Turkey Tail (*Trametes versicolor*), so called because of its multibanded bracket structure resembling the tail plumage of a turkey, is widely used in Japan for treating cancer. Its star polysaccharide PSK (polysaccharide Kureha, also "Krestin") is responsible for fully 1/4 of the total expenditure on anti-cancer agents in Japan. Its wide ranging effects on both cellular and humoral immunity are on par with those of Shiitake. *Please call us for details and pricing!* ❖

