Immune Support & Avini Health





Rik J. Deitsch, MS Biochemistry
Chief Scientific Officer, Avini Health

According to the Centers for Disease Control and Prevention (CDC), up to 5.4 million people in the United States already have been sick with the flu this fall. They also estimate that flu has caused as many as 55,000 hospitalizations and 4,600 deaths from Oct. 1 through Dec 2. The flu, like colds and other respiratory illnesses, is more common in cold weather as people tend to spend more time indoors, where viruses can pass more easily from person to person. Also, health experts believe the flu virus survives better in cold weather and cold, dry air weakens people's resistance.

The immune system exists in a delicate balance. It needs to recognize foreign invaders to be able to protect the body, but the reaction needs to be measured. If the immune system over-reacts to a

stimulus, it may cause much more damage than the original foreign body may have caused. As an example, an overactive immune system creates damaging free radicals that may increase risk for cancer or heart disease. It may also create inflammation that can cause tissue damage. Lastly, a hyper-immune response may create autoimmunity, where the immune system attacks normal, healthy tissue. Because of these risks, it is vital to create a viable check and balance system to maintain proper immune system health. This may be possible with natural immuno-modulating agents.

ZMUNITY Mushroom Blend:

Mushrooms have been used for health, wellness and medicines for thousands of years. It has been known for a long time that fungi produce potent bioactive compounds with medicinal properties. Classic examples of this fungal-derived class of medicines are antibiotics, such as Penicillin. It is therapeutically best to utilize a blend of several mushroom species, because "the whole is greater than the sum of its parts." For one thing, it is easier for pathogens in the body to adapt and become resistant to one mushroom than to several. Secondly, each mushroom species has a unique arsenal of anti-infective and immunomodulating agents.

These special agents include Polysaccharides, Glycoproteins, Ergosterols and Triterpenoids. These agents are precursors to the more complex compounds, beta glucans. It is the synergy between ALL of these elements that makes mushrooms so medicinally powerful when consumed as a whole food. The mushroom blend utilized in Avini's Zmunity are grown in a controlled environment in competition with each other. This allows the fungus to create incredibly high levels of beneficial biomolecules that include antioxidants, fibers and signaling molecules. To get the full benefit of these mushrooms, we only use a full spectrum extract of all seven mushrooms in the IAS blend. The IAS Full Spectrum Mushroom Complex in Avini's Zmunity is considered to be the most technologically advanced immune blend for use in dietary supplements on the market today. Featuring a combination of more than 200 highly purified, immune-active high molecular heteropolysaccharides and Beta 1,3-1,6 triple right hand helix beta glucans, IAS is derived from seven closely related organisms – 100% USDA certified organic, certified kosher, biotech lab cultivated, full spectrum, non-GMO:

Agaricus blazei (Sun), Lentinula edodes (Shiitake), Grifola frondose (Maitake), Trametes versicolor (Turkey Tail), Ganoderma lucidum (Reishi), Cordyceps militaris and Cordyceps sinensis (Caterpillar).

ZEOLITE

Full Spectrum mycoproducts are the complete fungal material consisting of all the biologically active components, including the mycelium, primordia, fruitbodies and, most importantly, the extracellular compounds produced throughout the entire life cycle of the organism. It is these extracellular compounds (compounds that are excreted outside of the cell and into the surrounding environment) that are responsible for the main medicinal properties known from the fungal kingdom. This includes all the antibiotic properties, antiviral properties, antifungal properties and all the other 'survival' compounds that the fungus produces to give itself an advantage over the competing bacteria and microbes in the highly competitive environment in which it lives. These secondary metabolites have opened up the frontiers of medicine, with such breakthroughs as antibiotics and cholesterol lowering drugs.

The Synergistic Benefits of Adding Detoxolite™

The concept of synergistic benefits takes into account that two or more substances work together so that their total effect is greater than the sum of their individual benefits. In biochemistry, this is usually a result of substances having similar benefits that are created through different mechanisms of action. Because the mechanisms are isolated from each other, their benefits can be maximized and usually results in synergy. Avini Health's proprietary activated and micronized zeolite (Detoxolite™) is a potent detoxifying agent that also functions as an immunodulator, an antioxidant and a pH stabilizer. When examining the synergies between the IAS Mushrooms and the activated zeolite, it is simple to note several distinct claims with differing mechanism to support those claims.

Both products act as immuno-modulators.

The zeolite does not stimulate the immune system, but allows it to function optimally by removing toxins, viruses, yeasts, bacteria and fungi, which can depress immune function and interfere with hormones. Additionally, heavy metals have been indicated in the inhibition or down-regulation of zinc finger proteins. These proteins are necessary for proper cell division and immune system response. The zeolite has been indicated in stabilizing zinc finger protein activation through the removal of inhibitory toxic heavy metals. As noted previously, the IAS Mushrooms modulate the immune system by cellular signaling. This increases T-Cell activation without creating a hyper-immune response. These provide several different mechanisms to activate and stabilize immune system function.

Both products provide superior antioxidant protection. Clinoptilolite zeolite is considered to act as an antioxidant through a simple mechanism of the capture and removal of small, oxidative compounds. The IAS Mushrooms function as an antioxidant because of its constituent antioxidant compounds, which include co-factors and polysaccharides. These quench free radicals through electron donation or electron acceptance. Again, there are two completely different mechanisms that provide the same benefit – creating a synergistic effect.

Anti-Mutagenesis.

Several studies have shown the effects of clinoptilolite on cancer cell lines and in tumors both in vivo and in vitro. This is primarily considered to be caused by the induction of apoptosis and the zeolite's activation of the p21 tumor suppression gene. Additionally, the zeolite acts to balance the body's pH and may create an inhospitable environment for cancer cell growth as systemic alkalinity is maintained. Agaricus extracts have been studied almost exclusively for their effects against cancer cell growth. The mechanism involved in this case is through immune system activation and immuno-modulation. The expected synergies result in a powerful immuno-modulating agent that reduces the risk of mutagenesis.

As Ben Franklin taught us, "An ounce of prevention is worth of pound of cure." We have all of the information that we need to maintain optimal health and prevent or minimize disease. So, take the time this cold and flu season to get educated on all of Avini Health's products to optimize your wellness, because a cleaner, healthier body fixes itself.

