



## ➤ Product Review ◀

July 2018 #315

### ***CORDYCEPS SELECT – NEW PRODUCT FROM MOSS NUTRITION***

Of all the products Moss Nutrition has released over the last 1-2 years, certainly one of the most interesting and unusual is **Cordyceps Select**. There are several reasons I make this statement. First, even though **Cordyceps Select** is actually the standardized fermentation product of cultivated *Cordyceps sinensis* called Cs-4, it is interesting to note the source of wild *Cordyceps*, as noted in the paper “Effect of Cs-4® (*Cordyceps sinensis*) on exercise performance in healthy older subjects: A double-blind, placebo-controlled trial” by Chen et al (Chen S et al. *J Alternative Complementary Med*, Vol. 16, No. 5, pp. 585-590, 2010):

**“Naturally occurring *Cordyceps sinensis* is a wild fungus found on the Qinghai-Tibetan Plateau of China at an altitude of about 10,000 feet. The fungus is parasitic and colonizes the larvae of moths until their inner body is filled mycelium. Wild *Cordyceps* is a composite consisting of the stroma of the parasite together within the larva of the Hepialidae moths.”**

Of course, one reason we decided on the fermentation product Cs-4 instead of wild, native *Cordyceps* is that many, if not most, customers may find the idea of ingesting moth larva innards a bit distasteful. However, there is another reason relating to supply and demand. Chen et al state:

**“Wild *Cordyceps* is increasingly rare in its natural habitat, and the price is now completely out of reach for clinical practice. For this reason and because of the scarcity of natural sources, a refined standardized fermentation product, Cs-4®, was produced from the mycelial strain**

***Paecilomyces hepialid* Chen at Dai that was isolated from wild *C. sinensis*.”**

Is this fermentation product, Cs-4, as effective as natural *C. sinensis*? The authors point out:

**“A close similarity between this fermentation product and natural *Cordyceps* has been demonstrated with respect to their chemical constituents (Cs-4 contains not less than 0.14% adenosine and 5% mannitol) and pharmacologic properties.”**

What is the specific source of our Cs-4 product? As noted in our technical bulletin on **Cordyceps Select**, it is a fermentation product produced on a rice substrate.

### ***REPORTED CLINICAL BENEFITS OF CORDYCEPS***

An excellent overview of the published clinical benefits of *Cordyceps* was published in the paper “Pharmacological and therapeutic potential of *Cordyceps* with special reference to cordycepin” by Tuli et al (Tuli HS et al. *J Biotech*, Vol. 4 pp. 1-12, 2014). The next few quotes from this paper highlight clinical uses of this herb. First, consider the following:

***Cordyceps* species is...known as a traditional Chinese medicine (TCM) as it has wide applications in the pharmaceutical and health sector.”**

In particular, it has been used to enhance athletic performance:

**“This medicinal mushroom was in the limelight during the Chinese National Games in 1993, when a group of women athletes broke nine world records, admitted that they had been taking *Cordyceps* regularly. It has been previously reported that *Cordyceps* also enhances physical stamina making it very useful for elderly people and athletes.”**

What is the mechanism of this effect? The authors continue:

**“Recent literature further confirms that *Cordyceps* enhances cellular energy in the form of ATP. Upon hydrolysis of phosphates from ATP, lots of energy is released which is further used by the cell.”**

Other health benefits are as follows:

**“The studies by many researchers in the past on *Cordyceps* have demonstrated that it has anti-bacterial, anti-fungal, larvicidal, anti-inflammatory, anti-diabetic, anti-oxidant, anti-tumor, pro-sexual, apoptotic, immunomodulatory, anti-HIV and many more activities.”**

Interestingly, the potential health benefits do not end there:

**“*Cordyceps* has a long history of use as a lung and kidney tonic, and for the treatment of chronic bronchitis, asthma, tuberculosis and other diseases of the respiratory system. The cardiovascular effects of *Cordyceps* are being noticed more frequently by researchers as it works through a variety of possible ways either by lowering high blood pressure via direct dilatory effects or through M-cholinergic receptors resulting in improvement in the coronary and cerebral blood circulation. Thus, *Cordyceps* has implications at the therapeutic level as well by rectifying the abnormalities in rhythmic contractions (also known as cardiac arrhythmia). *Cordyceps* extract has also been found as a promising source to increase cardiac output up to 60% in augmentation with conventional treatment of chronic heart failure. The product from wild type and cultured *Cordyceps* has also been shown to significantly decrease blood viscosity and fibrinogen levels preventing myocardial infarction.”**

The next quote specifically discusses a study employing Cs-4, the form of *Cordyceps* used in **Cordyceps Select**:

**“Another study showed that the fermentation products of Cs-4 reduce myocardial oxygen consumption in animals under experimental lab conditions revealing anti-anoxic effects. These studies provide strong evidence that Cs-4 and its fermentative solution prevent**

**platelet aggregation stimulated by collagen or adenosine di-phosphate.”**

### ***BEWARE OF CORDYCEPS SINENSIS PRODUCTS ADVERTISED AS “NATURAL SOURCE”***

As was noted from the Chen et al paper discussed above, natural *Cordyceps sinensis* from moth larva is very scarce and very expensive. Therefore, as you might expect, many products advertised as “natural source” or “wild” are not what they claim. Chen et al state:

**“...natural *Cordyceps* is often adulterated due to its increasing scarcity and very high market price.”**

### ***SOME FINAL THOUGHTS***

As I hope you can see from the above quoted research, *Cordyceps* appears to be a very versatile herb that can have a variety of important uses in clinical practice. In fact, we chose to add this product to our repertoire due to requests from customers who have had success with it. To learn more about **Cordyceps Select** from Moss Nutrition, please see the technical bulletin on the product that can be found on the Moss Nutrition website.

