



VITAMINS AND MINERALS TO BOOST YOUR IMMUNE SYSTEM

In order to help rebuild the immune system post-virus, experts recommend antioxidants which can be obtained from a variety of foods

VITAMIN C

Vitamin C is a natural antioxidant that protects the body against the effects of harmful agents (internal and external) and can negatively affect metabolic processes, leading to tiredness and fatigue.

Chinese studies have been treating some infected people with high doses of vitamin C due to its anti-viral properties.

Since it has a very low toxicity level, there is no risk of damaging vital organs, as long as the correct dose is administered for an individual as recommended by a health expert.

New York hospitals treating corona patients with VITAMIN C

Doctors throughout **New York** State are giving their critically ill **coronavirus** patient's massive doses of vitamin C, a tactic said to have helped those hit the hardest in **China**.

Dr Andrew Weber, a Long Island based pulmonologist and critical-care specialist with Northwell Health, shared that he has been immediately giving his intensive-care patients 1,500 milligrams of intravenous vitamin C.

Weber said the regimen is based on experimental treatments administered to coronavirus patients in Shanghai, China.

'The patients who received vitamin C did significantly better than those who did not get vitamin C,' he said. 'It helps a tremendous amount, but it is not highlighted because it's not a sexy drug.' And the Pharmaceutical companies cannot charge the high prices that they do for their own concoctions as Vitamin C is widely available and relatively inexpensive???

Vitamin C is being 'widely used' as a coronavirus treatment throughout the health system.

Patients with coronavirus who suffer sepsis - an inflammatory response that occurs when the body overreacts to the infection - suffer significant drops in vitamin C levels, said Weber.

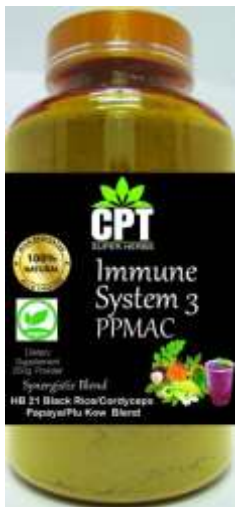
'It makes all the sense in the world to try and maintain this level of vitamin C,' he added.



Regimen is based off experimental treatments that were done in China. A clinical trial into the effectiveness of intravenous vitamin C patients with coronavirus was conducted on February 14 at Zhongnan Hospital (pictured) in Wuhan, China

IMMUNE SYSTEM 3

Immune System and Gut



Many people are concerned about staying healthy and maintaining a healthy immune system. Doing so can benefit your body and boost your defences against viruses, bacteria, and other pathogens. A KEY to not getting sick with any virus or illness is absolutely how you inspire and support your own IMMUNE SYSTEM and GUT FLORA

The Gut: Where Bacteria and Immune System Meet

By now, it's a familiar fact: Humans have more bacterial cells—a lot more—than human cells. Bacteria live on the skin, in the nose and ears, and, most of all, in the gut.

Until recently, if most people thought about those bacteria at all, we tended to think of them as fairly separate from us. They help with digestion, but otherwise they stay on their side of the intestinal lining, and we stay on our side. But, in fact, there is a lot of interaction between the body's immune system and bacteria in the gut. Researchers at Johns Hopkins are now in the early stages of figuring out how the composition of the gut changes in different diseases, how the body's immune system interacts with these tiny hitchhikers and particularly how that relationship may function in disease.

“A huge proportion of your immune system is actually in your GI tract,” says Dan Peterson, assistant professor of pathology at the Johns Hopkins University School of Medicine. “The immune system is inside your body, and the bacteria are outside your body.” And yet they interact. For example, certain cells in the lining of the gut spend their lives excreting massive quantities of antibodies into the gut. “That’s what we’re trying to

understand—what are the types of antibodies being made, and how is the body trying to control the interaction between ourselves and bacteria on the outside?”

“Our immune system does attack cancer cells,” says Professor Tim Elliott, a Cancer Research UK-funded immunologist from the University of Southampton. “It’s recognising and destroying little cancers as they develop all the time. If we didn’t have an immune system, then we would be developing cancer a lot more often.” Feb 28, 2019

The added benefits of good nutrition during cancer treatment and serious illness is why we add Organic Sprouted Black Rice to our PPMAC Herbal Blend.

More importantly the Immune System 3 PPMAC Blend is more valued if taken as a preventative to Cancers, Gut disorders and serious illnesses, as they say...Prevention is Better than Cure...

Each Bottle Contains 250 g. FORMULATION:

Plu Kow - 12.5g.	Papaya Leaf - 37.5 g.	Mangosteen rind - 25g.
Amalaki - 25g.	Cordyceps - 25g.	Sprouted Black Rice - 125 g.

As a General Maintenance dose - 5g to 10g per day after a meal

To Fight Cancer and serious illness: - Serving - 10g to 20g per day after a meal (1 Tea/Spoon = approx 5g)

When you’re healthy, eating enough food to get the nutrients and calories you need is not usually a problem. Most nutrition guidelines stress eating lots of vegetables, fruits, and whole-grain products; limiting the amount of red meat you eat, especially meats that are processed or high in fat; cutting back on fat, sugar, alcohol, and salt; and staying at a healthy weight. But when you’re being treated for cancer, these things can be hard to do, especially if you have side effects or just don’t feel well.

Good nutrition is especially important if you have cancer because both the illness and its treatments can change the way you eat. They can also affect the way your body tolerates certain foods and uses nutrients.

During cancer treatment you might need to change your diet to help build up your strength and withstand the effects of the cancer and its treatment. This may mean eating things that aren’t normally recommended when you are in good health. For instance, you might need high-fat, high-calorie foods to keep up your weight, or thick, cool foods like ice cream or milk shakes because sores in your mouth and throat are making it hard to eat anything. The type of cancer, your treatment, and any side effects you have must be considered when trying to figure out the best ways to get the nutrition your body needs.

The nutrition needs of people with cancer vary from person to person. Your cancer care team can help you identify your nutrition goals and plan ways to help you meet them. Eating well while you’re being treated for cancer might help you:

- Feel better.
- Keep up your strength and energy.
- Maintain your weight and your body’s store of nutrients.
- Better tolerate [treatment-related side effects](#).

- Lower your risk of infection.
- Heal and recover faster.

Eating well means eating a variety of foods to get the nutrients your body needs to fight cancer. These nutrients include proteins, fats, carbohydrates, water, vitamins, and minerals.

Immune system and age

As we age, our immune response capability becomes reduced, which in turn contributes to more infections and more cancer. As life expectancy in developed countries has increased, so too has the incidence of age-related conditions.

While some people age healthily, the conclusion of many studies is that, compared with younger people, the elderly are more likely to contract infectious diseases and, even more importantly, more likely to die from them. Respiratory infections, influenza, and particularly pneumonia are a leading cause of death in people over 65 worldwide. No one knows for sure why this happens, but some scientists observe that this increased risk correlates with a decrease in T cells, possibly from the thymus atrophying with age and producing fewer T cells to fight off infection. Whether this decrease in thymus function explains the drop in T cells or whether other changes play a role is not fully understood. Others are interested in whether the bone marrow becomes less efficient at producing the stem cells that give rise to the cells of the immune system.

A reduction in immune response to infections has been demonstrated by older people's response to vaccines. For example, studies of influenza vaccines have shown that for people over age 65, the vaccine is much less effective compared to healthy children (over age 2). But despite the reduction in efficacy, vaccinations for influenza and *S. pneumoniae* have significantly lowered the rates of sickness and death in older people when compared with no vaccination.

There appears to be a connection between nutrition and immunity in the elderly. A form of malnutrition that is surprisingly common even in affluent countries is known as "micronutrient malnutrition." Micronutrient malnutrition, in which a person is deficient in some essential vitamins and trace minerals that are obtained from or supplemented by diet, can be common in the elderly.

The five herbs included in our formulation are Papaya leaf, Potentiated Plu Kow leaf, Mangosteen rind, Amalaki fruit, Cordyceps (PPMAC). Sprouted Black Rice is used as an extremely effective delivery medium to the body. Each of these ingredients functions in synergy with the others to produce an overall effect which can be dramatic.

When we address a biophysical challenge along different metabolic pathways that support one another we create synergy – a stronger effect than the sum of the parts. The biological mechanisms are simplified to make their most basic effects clear, but there are literally thousands of interacting agents at play in all cases.

The super- strong antioxidants provided by Mangosteen rind and Amalaki (Amla) fruit protect the apoptotic cells from attack by free radicals. The high level of digestive enzymes in the papaya leaves digest the fibrous protein coating that protects cancer cells from recognition and attack by your immune system. Cordyceps provides polysaccharides that activate and potentiate your immune system, and Cordycepin employs DNA fragmentation to prevent the cancer cells from replicating. Potentiated Plu Kow is widely

used in Asia but virtually unknown to the West and, like Cordyceps, demonstrates a variety of cancer fighting capabilities that include DNA fragmentation and immune system activation and support.

Cellular Preservation Technology (CPT)

A proprietary new way of producing concentrates from herbs and plants through *natural disintegration* - without crushing, grinding, pressure, heat or other destructive means that would otherwise destroy live enzymatic matter, nutrients and bioactivity. This allows for CPT treated plant material to maintain optimal levels of its original antioxidant and nutrient profiles in comparison to traditional tray or sun dried goods. (See End of Brief to read More about CPT.)

PURITY & FRESHNESS

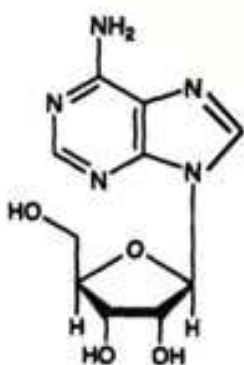
Due to the nature of CPT processing, we can only use wild crafted, fresh, uncontaminated harvests of very high quality. There is a strict 24 hour harvest-to-input period applied - all freshly cut plants are delivered to the facility and input through the process immediately to maintain optimal nutrient levels and avoid contaminants.

This means: No Fillers - No Pesticides - No GMO's - No Chemical Fertilizers - No Pollutants

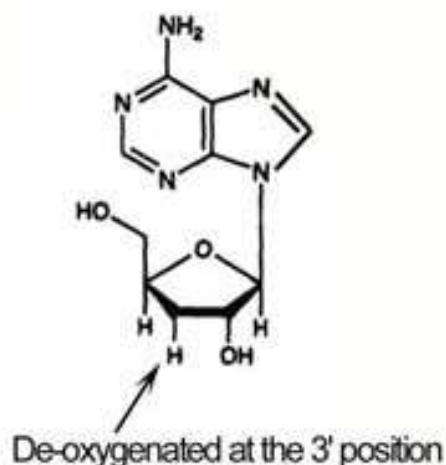
No Old/Expired/Frozen Plant Harvests

The chemical analysis and measurement of specific targeted compounds is a valid analytical tool, but does not fully explain the body's adaptive systems. Cellular Preservation Technology (CPT) takes you beyond the chemistry per se. CPT involves a holistic approach that includes subtle mechanisms of nature operating with intelligence through patterns of association and encoded information

Normal Adenosine



Cordycepin



The metabolic pathway or biological mechanism in this case does not aim at destroying the target pathogen, but rather inhibiting its replication process while not harming its host.

Cell apoptosis via DNA Fragmentation: Cordycepin is an adenosine derivative differing from adenosine only by the absence of one oxygen atom which has a very specific and dramatic effect due to its location. The absence of this oxygen atom at this specific location prevents the formation of a bond between adjacent nucleosides which forms the "ladder structure" that holds

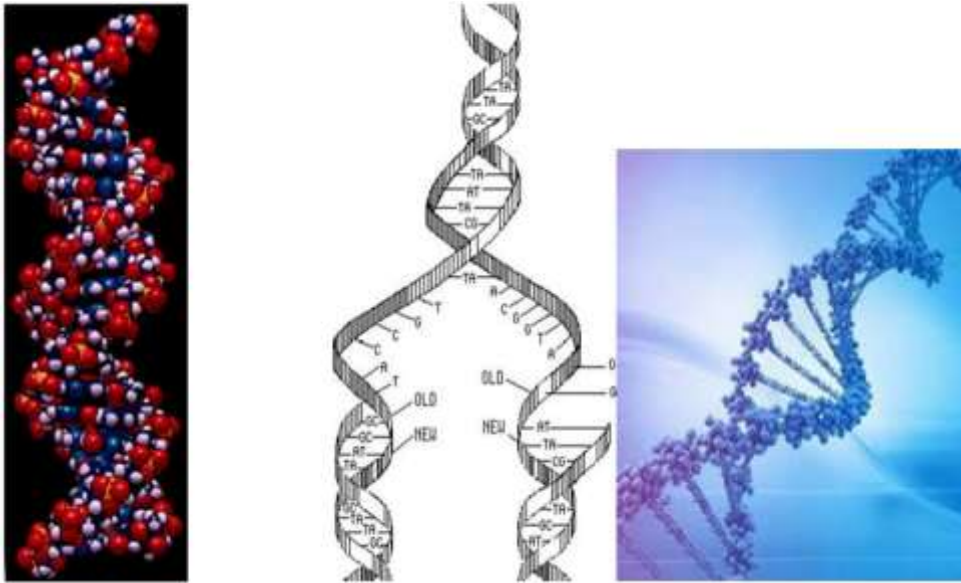
the DNA together. This bond is between the 3' and 5' positions on the ribose portions of the adjacent nucleosides and when they do not bond, the DNA fragments and can't replicate.

Healthy cells have an inherent DNA repair mechanism which removes the oxygen deficient atom from the nucleoside string and replaces it with a new segment of adenosine. However, cancer cells have lost this DNA repair mechanism. So while the tumor cells experience DNA fragmentation halting DNA replication, Cordycepin does not interfere with healthy cell replication. (Note: all viruses including HIV and many bacteria also lack this repair mechanism and this may explain the antiviral/anti- bacterial effects of cordyceps).

Cancer cells replicate very much faster than surrounding healthy cells, but Cordycepin interferes with only cancer cell replication at a tumor-cell kill rate that is even higher than the increased velocity of untreated cancer cell proliferation.

Some chemotherapy agents employ the same DNA replication interruption mechanism to achieve their anti-tumor effects.

These models show how atoms of sugars, phosphates, and nitrogenous bases fit together to make the double helix structure of DNA. A missing oxygen atom in the structure of Cordycepin prevents the formation of a bond in the double helix or "ladder structure" and thereby fragments the DNA preventing cell replication.



Studies published in the “American Journal of Chinese Medicine” reported that Plu Kow reduced viral RNA synthesis and virus induced caspase 3 activity. This study indicated that Plu Kow affected apoptotic processes in EV71 by inhibiting viral replication. (Vol 37, Issue 1, 2009 by Lin [et.al.](#)) Essential oils found in Plu Kow have been found to effectively terminate the DNA chain during DNA replication.

Immune System Activation and Modulation

The human body can read the “markers” that determine if a substance within the body is natural to the body or a foreign substance. When the body perceives foreign markers it interprets this as a threat and

takes action to rid the body of this substance. Cordyceps and Plu Kow are both noted for their immune system activation due to their high levels of polysaccharides.

Polysaccharides most notably beta-d-.glucans is recognized by our bodies as foreign molecules and this recognition activated your immune system. They set off an alarm that jerks your immune system to attention. Polysaccharides stimulate and potentiate the immune system and work to modulate the synthesis of your endogenous antioxidant enzymes such as superoxide dismutase and glutathione.

In Asia the understanding of Cordyceps' and Plu Kow's efficacy as immune system activators and modulators has resulted in a very high percentage of cancer patients using them while undergoing conventional treatments.

Plu Kow's immune system support is one of its most well researched and most notable qualities. A research team from the Medical Science Department, Ministry of Health (Thailand) studied the effects of Plu Kow on the immune system and found that it sets up an alarm that alerts dividing white blood cells to the presence of a foreign body. This study also investigated the effects of Plu Kow leaf used as an ingredient in herbal remedies and concluded that it helps dividing white blood cells in normal healthy people as well.

Immune System Support

Prevention and treatment of any serious illness requires that we boost our immune system and, in the case of cancer, boost our ability to kill infected cancer cells. We must strengthen our defenses by inducing synthesis of NK cells, T Cells, B Cells, CD8, and CD 4 which provide cytotoxicity against tumor cell lines.

Immune system support, as it relates to the herbs in our formulation, could easily take a book. All the herbs strengthen the immune system. However Plu Kow stands out as one of the most effective immunomodulatory herbs known.

A research study indicates that a polymer of the essential oils in Plu Kow (houttuynin) combines with sodium bisulfite to create the compound, Houttuynin sodium bisulphite (HSB) which helps to induce antibody synthesis and also helps to enhance the functions of macrophage white blood cells, increasing their capacity to find and destroy impurities by increasing the synthesis of lysosomal. Lysosomal is an enzyme that digests engulfed viruses and bacteria to induce apoptosis. Plu Kow also increases the creation of IL-1B and IL-2 lymphocytes.

Alkaloids extracted from Plu Kow have been shown to destroy five kinds of human cancer cells: colon cancer, malignant melanoma, ovarian cancer and lung cancer. One of Plu Kow's alkaloids, spendidin demonstrates the ability to destroy cancer cell lines ED50. Aristolactam B, another alkaloid extracted from Plu Kow demonstrates effects on XF- 498.

Compounds including Plu Kow leaf juice fed to five leukemic cell lines stopped the growth of all five.

In China, powdered compounds including Plu Kow leaves are used to treat cancers in the alimentary canal, respiratory canal, breast, womb, stomach, rectum and lungs. Plu Kow is also used for healing the side effects caused by radiation and chemical cancer therapies.

Plu Kow provides strong immune support by stimulating lymphocyte synthesis including:

- NK (Natural Killer) white blood cells which scan the body for abnormal cells, destroying them before they can develop. NK cells regulate the immune system through cytokine secretions that drive the antitumor cellular immune response.
- T Cells locate and identify antigen markers on invading cells and inject a poison to kill them.
- B-cells produce and secrete specific plasma cells that produce antibodies.
- CD8 is a trans-membrane glycol protein that forms a powerful branch of the adaptive immune system by eradicating intracellular infections and helps to control a wide spectrum of chronic infections as well as eradication of tumors. In the final stage of fighting infections, CD8 develops cellular memory. Memory CD8 cells provide protective immunity against both acute and chronic viral infections.
- CD4 is a glucoprotein found on the surface of immune cells that send signals to other immune cells (including CD8) to destroy an infection. If CD4 cells are depleted (such as in the case of untreated HIV) the body is left vulnerable to infections it would otherwise be able to fight.
- Ig G: Immunoglobulin G is the most abundant antibody isotope found in the blood and extracellular fluids controlling infection of body tissues by a variety of immune mechanisms that include:
 - Immobilization and binding together of pathogens
 - Recognition and ingestion by immune cells
 - Activation of immune protein production resulting in pathogen elimination
 - Binding and neutralizing toxins.
- IgM: Immunoglobulin M is a basic antibody produced by B Cells and found in the blood and lymphatic fluids. This is the largest antibody in the human circulatory system
- IL B1: Interleukin B1 cells are lymphocytes essential to the development of autoimmunity. IL B1 mediates host resistance against multi-cellular, extra-cellular pathogens.
- IL 2: Interleukin 2 cytokine signaling molecules regulate the activity of white blood cells responsible for immunity against microbial infections.

In Japan fermented liquid Plu Kow (known as Dokudami) is regarded as a “cure all”. The Japanese Medicines Codex approves Dokudami as a diuretic making it one of the very few medicinal plants that have earned a place in the Japanese Medicine Codex.

Plu Kow was one of the eight compounds selected to treat SARS in China.

Cordyceps: The bi-directional regulation of immune function is known as immunomodulation. When Cordyceps is taken by a patient in an immune-deficient state (cancer, HIV) white blood cells increase in quantity and activity. When the same Cordyceps is given to someone in a hyper-immune condition (Lupus, Rheumatoid arthritis) the quantity and activity of white blood cells decrease while red blood cells increase. This bi-directional effect is typical of Adaptogens and is not experienced in allopathic medicine. The adaptogenic mechanism lies in the differentiation phase of blood cell production in the bone marrow, where immature cells are directed to various organs to mature. Signals from the body affect an appropriate response to attain homeostasis.

Polyphenols found in Plu Kow provide strong antioxidant activity which plays a crucial role in immune system support by inhibiting lipid peroxidation.

Antioxidant activity plays a critical role in fighting cancer. Antioxidants inhibit lipid peroxidation (oxidative damage to fats and fat-soluble vitamins such as A, D, E and K). Apoptotic genes experience oxidative damage by free radicals. Scavenging free radicals protects apoptotic genes thereby promoting the death of cancer cells. This is the biological mechanism by which antioxidants combine to increase the effectiveness of the other bioactive ingredients in our formulation.

Cordyceps and Plu Kow have been used extensively in Asia for cancer treatments as adjunctive therapies alongside radiation and chemotherapy. They have been shown to increase stamina, reduce the damage done by conventional therapies and assist in faster recovery. When the body is generally

strong and vital and the immune system is well tuned we are less subject to the negative effects of radiation and chemotherapy. In fact the health care professionals that advocate the use of herbs and botanicals as adjunctive therapies argue that these herbs allow your immune system to recover faster and by doing so allow the body to handle stronger and more frequent conventional chemo-treatments than would be possible without them.

The knowledge of *Cordyceps*' and Plu Kow's efficacy against cancer is so widespread in the Orient that the vast majority of cancer patients in Japan, Korea and China are already taking *Cordyceps* (or some other mushroom and/or fungus derived immune modulator) and/or Plu Kow while undergoing conventional treatment. Because of this widespread usage, it is a well-known fact that Cordyceps, Plu Kow and other polysaccharide immunomodulators (such as PSK, PSP, Lentinan, AHCC and arabinoxilanes [MGN3™]) will reduce the severity and duration of side effects associated with Chemo and Radiation therapies.

The most limiting factor in the effectiveness of chemotherapy treatment for cancer is the toxic destruction of the patient's immune system. More patients' die of opportunistic infections during chemotherapy than ever die of the cancer itself. ("The operation was successful, but the patient died.") The hope is that the chemo will kill the tumor cells before killing too many of the healthy cells. The white blood cell count of the cancer patient is carefully monitored during chemotherapy and the dosage and schedule of treatments is adjusted to maintain an adequate immune system. If we can, through the use of Cordyceps and Plu Kow, strengthen the immune system, the dosage and frequency of chemotherapy can be increased. The effectiveness of the conventional treatment can be enhanced, the damage can be decreased and recovery can be accelerated.

Throughout Asia, many conservative medical practitioners seem receptive to using these herbs as an adjunctive therapy alongside their conventional treatments.

Free Radical Scavenging

The super strong antioxidants provided by Mangosteen rind, Amalaki fruit and Plu Kow leaves protect the apoptotic cells from attack by free radicals.

1. Amalaki, processed by Dynamic Freeze Drying, displays super high levels of Vitamin C and antioxidants. Lab test results for ORAC from a highly reputable European lab are attached.

AMALAKI (AMALA): "THE GREAT REJUVENATOR"



Used in India as a traditional remedy to treat the blood, bones, liver and heart.

Ayurveda attributes Amalaki with the ability to help rebuild and maintain new tissues and improve red blood cell count.

In

Ayurveda self-healing is achieved through conscious creation of balance (homeostasis). It describes the transference of energy into matter and matter into energy. Aberrations in this energy transference create malfunctions in the cells. The remedy is not in the chemistry per se, but in the creation of balance. In fact, when the body is balanced (as in meditation) our metabolism slows down as measured by oxygen consumption, cardiac output (work load on your heart) drops, while blood circulation increases at the

same time. Lactic acid levels (a measurement of stress) decrease. In balance, the entire function of our physiology becomes optimized and super-efficient, and our immunity to illness is at its best.

Amalaki has been used for over 5,000 years by yogis to cleanse their system before deep meditation. It is one of the most important herbs in the Ayurvedic medical tradition. A primary focus in Ayurveda is eliminating the toxins that will otherwise accumulate, enter the bloodstream and create aberrations in the transference of matter to energy and energy to matter that result in malfunctions in the cells and health problems.

Every cell in our body is regarded as a center of awareness imbued with intelligence, its aim being the conscious creation of balance (homeostasis) and infinite coherence. Amalaki is known in Ayurveda as “The Great Rejuvenator” and translates into Sanskrit as “The Sustainer” or “The Nurse.” It is recognized within Ayurveda as the single most effective botanical for promoting cellular rejuvenation and providing vitality, Amalaki holds legendary status as an anti-aging botanical.

One of the most interesting properties of Amalaki is its ability to cleanse the entire elimination system including the large and small intestines, colon, liver, kidneys and bladder. Accumulated waste products prevent optimum functioning of our physical systems. According to Ayurveda, when the sinus is congested, clean the colon. When the waste products of the body are eliminated, the sinus is cleared. Amalaki is effectively used throughout India and Asia to clear sinus, throat, and lung conditions. Amalaki is also used to cleanse the blood and promote cellular rejuvenation.

VITAMIN C: Amalaki is the plant kingdom’s highest natural source of vitamin C, with 3000 mg per fruit. Amalaki juice contains approximately 20 times more vitamin C than orange juice and this is even further concentrated (approximately 5X) in its dry powder form. This extraordinarily high natural vitamin C content provides Amalaki with strong antioxidant properties among the many other known health benefits of vitamin C. The vitamin C in Amalaki is protected from oxidation from heat by tannins which protect and preserve its vitamin C. Naturally occurring vitamin C is more bio-available and substantially more effective than synthetic vitamin C.

RAPPORT D'ANALYSE N° VZ-14020357-1

Code Client : 10723
 Bon de commande 3900 du 21/02/2014
 Date : 0001-14
 Vendeur : 03032014

BOBWELLIA
 François Gérard
 Les Poissons
 73270 VILLARD-SUR-DORON
 FRANCE

ECHANTILLON N° : 14020357 Date de Réception : 21/02/2014

Description : Echantillon n°1 - Analyse
 Marque :
 Lot : AM01
 Identifiant fournisseur :
 Date de fabrication :
 Code fournisseur/lot. prestataire :
 DLC / DLUO :
 Conservation :
 Conditionnement :
 Température ambiante
 Bochet en plastique

Analyses/Méthodes	Résultats	Spécification	Unité
OPAC Poudre antioxydant ¹⁾	Méthode spectrophotométrique (UV-Vis)		
Date d'analyse: 28/02/14			
Mesure de pouvoir antioxydant	390		µmol d'équivalent Trolox/g de produit

Commentaires :

¹⁾ Extrait obtenu après 24h de mélange automatique.

SLS-HOUE
 Responsable IMA Analyse



En document le présente que les données de base, sa responsabilité nous autorise que nous ne sommes pas responsables de la qualité de l'analyse.

Thai Researchers Discover Anti-Cancer Formula from Mangosteen Rind

By Thailand Press Release News 08 August

2012



Thirty five years ago, a group of researchers at Prince of Songkhla University and Chiang Mai University successfully extracted an interesting substance from Mangosteen peel. Called GM-1, the substance is found to be effective in killing bacteria that are antibiotic resistant, three times better cure of inflammation than aspirin, have better antioxidant quality than vitamin E and most importantly can effectively kill cancer cells in the lab. From such substance, the researchers produced antibacterial cream that provides better treatment of wound with Streptococci and Staphylococcus bacteria that are resistant to penicillin and methicillin. That was when Mangosteen peels, which once created a lot of pollution and waste, become valuable.

In the peak of fruit season, Mangosteen, like many other fruits, becomes abundant and thus the price is lower while waste increases. In 2009, a group of researcher at the Thai Mangosteen Research and Development Center produced Mangosteen juice that provides a good solution to people with imbalance immunity. The researchers controlled the GM-1 in the juice at the appropriate level in order to produce the best effect to health. Mangosteen's then become even more interesting among scientists and researchers.

Now, new discovery of the purple skin fruits, which are known as the Queen of Thai fruits, has stunned the global medical industry. Asian Phytoceuticals Public Company Limited's Thai Mangosteen Research and Development Center, in cooperation with Chiang Mai University have conducted a research further on GM-1 admixed formula at the Biomedical Technology Research Center, Chiang Mai University, and found that at controlled level, such natural extract from Mangosteen effectively produce balancing immunity (BIM). At different levels, the natural extract produces different results. It is therefore very effective in treating patients with different problems related to imbalance immunity. In the experiment, it is found that volunteers who consumed 2 gm of BIM substance for 15 days, Th1 cells doubled while TH17 cells were increased by 5 times.

It is known for more than 20 years among immunologists that Th1, a type of white blood cells enable body immunity to effectively eliminate foreign cells, such a fungi, bacteria, virus and cancer cells. Th17 cells were discovered in 2007 and found to be highly effective in preventing cancer cells to grow and inhibiting cancer symptoms. The discovery that BIM can increase the number of the two white blood cells, especially Th17, is a real breakthrough.

Prof. Dr. Pichaet Wiriyachitra, head researcher, Thai Mangosteen Research and Development Center, commented on the discovery of BIM and its effectiveness in promotion Th17: "We are so proud of Thai researchers for this valuable discovery. Starting from GM-1 discovery, our brilliant researchers mixed it with natural extracts from guava, black sesame, soybeans and Asiatic Pennywort. Thanks to their knowledge, more than 30-year experience and creativity, they successfully formulate BIM which is effective in achieving immunity balance without any side effect. We believe this will help enhance quality of life of cancer patients."

In its commitment to research and development for quality of life of consumers, Asian Phytoceuticals PCL fully supports the test of BIM on cancer patients at Chiang Mai

University's Faculty of Medicine. The researchers tested the extracts on final stage lung cancer patients who do not anymore respond to chemotherapy, conducted under supervision of Prof. Sumitra Thongprasert, MD, as well as patients suffering from other kinds of cancers who do not respond to normal therapy in the US and Italy. The result is very positive. It effectively enhanced quality of life of the patients and significant prolonged the life expectancy of final

stage cancer patients who do not respond to normal chemotherapy.

While there is not yet completely safe and efficient way to expand Th17 in huge volume enough to treat cancer patients, the fruit extracts discovered by the Thai researcher team emerged as an interesting solution. More importantly, the natural extracts are proven safe and effective and are produced at lower cost of production

compared to other medicine imported from other countries.

Given the significant success on BIM, quality of life of cancer patients will be significantly improved. In addition, it is believed to create greater economic value and social contribution to Thailand while natural resources are utilized.

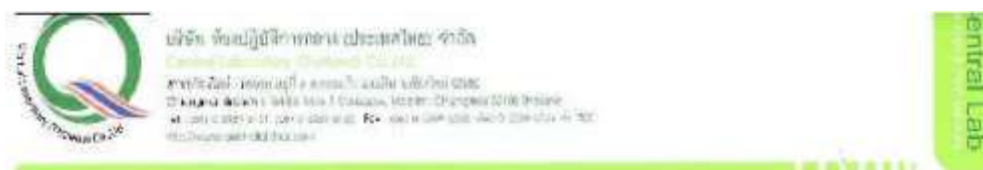


Mangosteen has long been used in Asia for its powerful anti-inflammatory properties. There may be no other plant more widely used and studied in Asia that is so unfamiliar to the Western world.

Noted ethno biologist, Dr. James Duke has identified 210 distinct active ingredients found in mangosteen, each of which play a role in maintaining balance in the human body.

Modern medical research supports the fact that the “alpha mangostin” and “gamma mangostin” Xanthones found in mangosteen are among the most powerful and effective antioxidants found anywhere in nature. They are highly bio-available and help your body to fight oxidation and the evasive deleterious health effects caused by oxidative imbalance.

The protective nature of antioxidants in mangosteen are somewhat unique. Their Xanthones structure allows them to bind to the inside of cell membranes where they exert antioxidant activity protecting the structure and function of the cells. Recent studies (advanced proteomic evaluation) indicate that mangosteen Xanthones enhanced the protective benefits of cellular proteins.



Issue Date : February 24, 2014

Report No : TR (CM) 57/03309

Page : 1 of 1

TEST REPORT

Customer Name and Address	TITAI FREEZE DRY CO.,LTD. 165/3 Moo. 1, T. Changphuek, A. Muang, Chiang Mai 50300
Sample Description	Freeze Dried Mangosteen Bulk Powder
Sample Code	CM57/01307-002
Sample Characteristic and Condition	Sample type: Freeze Dried Mangosteen Bulk Powder Packaging : plastic bag, tightly sealed, Quantity : 1 bag, Weight/Volume : 511 g, Receipt condition : room temperature, normal condition.
Received Date	February 06, 2014
Test Date	February 06, 2014 - February 21, 2014

Analysis Results

Test Items	Test Results	Units	LOD	Reference Methods
Total Antioxidant (Trolox)	4911	mg eq Trolox / 100 g	-	DPPH - Method

Approved by: 
(Mrs. Chanoy Thonglue)
Director,
Laboratory Services, Chiangmai Office

Papaya Leaves Digestive Enzymes

Digestion of the fibrous protein coating that protects cancer cells from recognition and attack by your immune system makes a strong contribution to our formulation.

Papaya leaves have been used as traditional medication for centuries. In Australia in the 1970's the traditional aboriginal use of papaya leaves became a popular remedy for prevention and reversal of active cancer and tumors based on a large volume of anecdotal evidence. Due to lack of scientific validation the trend died down. In 2010, the international media publicized the findings of a University of Florida study which showed that an extract of freeze dried papaya leaves can reverse cell growth in ten common varieties of human cancer.

Evidence suggests that the direct anti-tumor effects of papaya leaves are due to their highly concentrated digestive enzymes which digest the fibrous protein coating that protects cancer cells from recognition and attack by our immune system. This is in addition to the effects of boosting the immune system.

Scientific studies conducted at the University of Florida in 2010, made headlines world-wide when researches demonstrated that papaya leaves reversed the growth of ten strains of active human cancers.



University of Florida researchers find cancer fighting properties in papaya tea

Published: March 9 2010
Category: Health, Research

GAINESVILLE, FL. — the humble papaya is gaining credibility in Western medicine for anticancer powers that folk cultures have recognized for generations.

University of Florida researcher [Dr. Nam Dang](#), and colleagues in Japan have documented papaya's dramatic anticancer effect against a broad range of lab-grown tumors, including cancers of the cervix, breast, liver, lung and pancreas....

In a paper published in the Feb. 17 issue of the Journal of Ethno pharmacology, Dang and his colleagues also documented for the first time that papaya leaf extract boosts the production of key signaling molecules called Th1-type cytokines. This regulation of the immune system, in addition to papaya's direct antitumor effect on various cancers, suggests possible therapeutic strategies that use the immune system to fight cancers.

The papaya extract did not have any toxic effects on normal cells, avoiding a common and devastating consequence of many cancer therapy regimens. The success of the papaya extract in acting on cancer without toxicity is consistent with reports from indigenous populations in Australia and his native Vietnam, said Dang, a professor of [medicine](#) and medical director of the [UF Shands Cancer Center Clinical Trials Office](#).

“Based on what I have seen and heard in a clinical setting, nobody who takes this extract experiences demonstrable toxicity; it seems like you could take it for a long time — as long as it is effective,” he said.

Researchers exposed 10 different types of cancer cell cultures to four strengths of papaya leaf extract and measured the effect after 24 hours. Papaya slowed the growth of tumors in all the cultures.

To identify the mechanism by which papaya checked the growth of the cultures, the team focused on a cell line for T lymphoma. Their results suggested that at least one of the mechanisms employed by the papaya extract is inducing cell death.

In a similar analysis, the team also looked at the effect of papaya extract on the production of antitumor molecules known as cytokines. Papaya was shown to promote the production of Th1-type cytokines, important in the regulation of the immune system. For that reason, the study findings raise the possibility of future use of papaya extract components in immune-related conditions such as inflammation, autoimmune disease and some cancers.

New study reveals that Papaya Leaf may be a powerful Anti-cancer Food



Other than being well known for their lively orange fruit, papaya trees are turning out to be more famous because of some studies which are stating that papaya leaf can avert tumor cell development.

Papaya, the tumor fighter

A late study archived the effect of papaya leaf working well against malignancy. The discoveries demonstrated that when a harmful tumor was exposed to the papaya leaf, the development was backed off significantly. Nevertheless, the Papaya leaf is not a cure. It can decrease cancer development without the negative effects of chemotherapy.

During the studies, 10 distinctive types of cancer including lung, breast, pancreatic, liver and cervix disease were exposed to the papaya leaf and in each and every case; the Papaya moderated the development of the tumors. What's amazing is, the bigger the dosage of papaya leaf was, the more potent the anticancer effects were.

This is incredible news for many people who are experiencing cancer specifically every day. Piles of cash are being wasted towards research for cancer cures, yet right up 'til today, cancer remains hard to cure.

Papaya leaf and Th1-Sort Cytokines



Th1-sort cytokines are hormonal messengers in charge of the natural effects of the immune system. Papaya leaf fortifies the generation of these particles, giving you a stronger and healthier immune system.

Extra Recuperating Properties of Papaya Leaf

Revitalizes your body by keeping up energy and imperativeness

- Enhances cardiovascular and gastrointestinal wellbeing
- Counteracts cataract development
- Stops inflammation
- Aids with Nausea and constipation
- Can decrease glucose levels

Sprouted Black Rice

A Link to an interesting Video article on Black Rice

<https://youtu.be/cWzkyrZ21sc>

Dynamically Freeze Dried Sprouted Black Rice Powder is a one-of-a-kind functional food with a broad spectrum of popularity and application that is unique to the market.



Black rice is a functional super food with a well balanced nutritional profile, high in antioxidants, with a **full amino acid profile and high in Beta Gluten**. (plus many other benefits as listed in **NUTRITIONAL** data)... **The Sprouted Black Rice** is perfectly matched as a carrier for our **PPMAC**.

Black rice is rich in anthocyanin antioxidants, minerals, vitamins and amino acids. It is the most nutritional variety of rice. Black rice is a wholegrain which is non-GMO, gluten free, cholesterol free, low Glycemic, fat, and salt, yet high in fiber, antioxidants, Vitamins B and E, niacin, thiamin, magnesium, iron, zinc and phosphorous.

Sprouted black rice powder is the ultimate “Functional Food,” an industry category assigned to foods that deliver therapeutic levels of beneficial constituents in a convenient whole food form. This lines up with our mission to revive your relationship with nature’s complete foods.

In ancient China, Black Rice was reserved exclusively for Royalty. It was thought that it would extend their lives. In light of recent scientific studies on the anti-aging effects of antioxidants it seems like this ancient knowledge was on the mark.

Protein synthesis:

Black rice is a good source of energy, and contains in the range of 7-8% high performance plant-based protein, but of even greater significance, is its rich amino acid content which provides the body with all of the basic building blocks for proteins. Our bodies synthesize proteins from amino acids, a strong amino acid profile results in increased protein synthesis.

The process of synthesizing a protein is called “translation”, and it occurs at the cellular level, proteins are produced when amino acids bond together in long chains.

Plants are able to make all the amino acids they require. Humans, on the other hand, don’t have all the enzymes required for the biosynthesis of the complete range of needed amino acids. **This rich amino acid profile makes TFD’s sprouted black rice powder with all amino acids required by humans to synthesize proteins including every one of the nine essential amino acids an exceptional plant-based source of the buliding blocks for human protein synthesis.**

Branched-chain amino acids (BCAA’s) are the essential proteinogenic amino acids. Leucine, isoleucine and valine account for 35% of the essential amino acids in muscle proteins. As you can see from the amino

acid profile TFD's sprouted black rice powder is rich in these BCAA's which promote protein synthesis and protein turnover (balance between protein synthesis and protein degradation). Targeted glucose transport proteins cross the blood brain barrier where they play a role in protein synthesis, synthesis of neurotransmitters, and energy production.

People with low dietary protein intake can promote muscle protein synthesis, increase gradual muscle growth, and prevent fatigue by ingesting foods rich in BCAA's. This is particularly important in the case of novice and professional athletes as well as anyone concerned with their fat to muscle ratio.

Cyaniding 3 Glycosides C3G:

One of the rare antioxidants abundant in black rice is Cyanadine-3-Glocuside (C3G). C3G can have a dramatic positive effect on your body's ratio of fat to muscle as well as energy levels. C3G changes the gene expression of fat metabolism from storage to usage.



CELLULAR PRESERVATION TECHNOLOGY

It is this process that distinguishes our herbs from all others.

1. Our herbs do not require any preservatives or heat treatment to prevent degradation. If this were a crème or liquid it would require preservatives since moisture is the medium for the enzymes and microorganisms to degrade the product.
2. The enzymes, vitamins, minerals and other vital ingredients are preserved with their full potency intact. The value of the herbs and botanicals are kept at their highest level.
3. It is exactly this high level of preservation of the vital ingredients that create the results that we would otherwise not achieve in traditional drying methods, even if we had used exactly the same ingredients in exactly the same proportions.
4. If we use heat to remove the moisture (de-hydration), the heat will denaturize the enzymes (making them ineffective), reduce the protein levels considerably and oxidize thermo-sensitive vitamins such as Vit C and beta-carotene.
5. The freeze dry process eliminates water without exposure to heat thereby preserving all of the enzymes, vitamins, minerals, and bioactive compounds.
6. The very small particle size (micronization - no need for grinding) and porous particle structure achieved by the Bio-Dynamic Freeze Dry Process allow our herbs to be more easily absorbed and metabolized. Vitamins such as Vit C are fat soluble and are easily and quickly absorbed into our body.
7. The effectiveness and capabilities of all our herbs are greatly enhanced due to the particulate size and structure produced by our transitional and evolutionary Freeze Dry process.


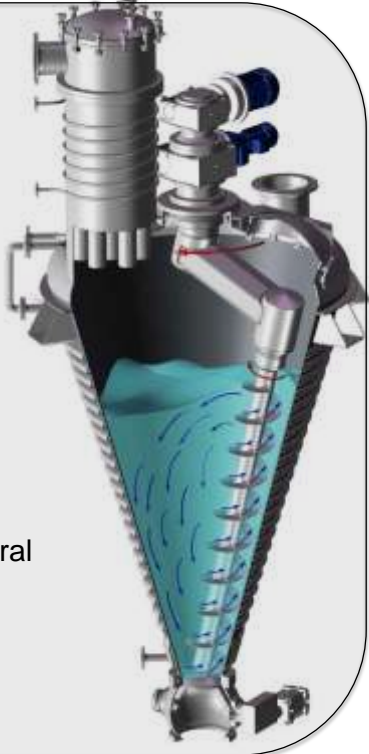


The Technology – Cellular Preservation Technology (CPT)

Cellular Preservation Technology or CPT is a proprietary technology which utilizes a modified form of freeze drying.

Freeze Drying has been used for centuries however the common industry standard freeze dry method typically uses traditional 'static' freeze drying with a further process of mechanical grinding.

Image 1 – Traditional Vs Cellular Preservation Technology (CPT)

Traditional freeze drying	Cellular Fracture Line technology
	
<ul style="list-style-type: none">- multi-step process; bacteria and mould growth risk.- static materials sitting on trays; 10-20% residual moisture- product ground into a powder; product cell structure destroyed	<ul style="list-style-type: none">- 1-step process- super frozen particles fly around in the product chamber- no mechanical grinding.- brittle material motion and sublimation of ice structure that hold it together causes product to break along natural elemental fracture lines.- <0.1% residual moisture

CPT is a key component in the creation of our functional foods. It allows us to preserve a whole food in its fresh form, thus maintaining all of the medicinal activity of a live plant while providing the safety of a stable commodity.

This proprietary and transitional preservation process gives us the unique ability to provide a superior product compared to anything else available on the market today. The 'secret' to our

technology is the Herbs are dried while they remain frozen in a vacuum state, rather than sitting motionless on trays (as in the traditional tray freeze drier), the product is flying round in a vortex. The deeply flash-frozen CPT granules decrease in size due to sublimation of the connecting ice structure and break into increasingly smaller particles along natural elemental fracture lines.

This creates a smaller particle size and porous structure without cellular hemorrhaging, caused by mechanical grinding of the traditional process as used in the industry today. CPT particles are much more easily absorbed and metabolized (more bio-available), and are more soluble for use as a catalyst ingredient in other formulations.

Solubility

As a food ingredient our herbs are highly soluble. Solubility ties into taste as well as ease to combine with other ingredients. This high level of solubility (enhanced by the CPT freeze dry process creates a more soluble particle structure),

Fresh Super herbs and Super foods

As soon as our botanicals are harvested they naturally begin to degrade. It is critically important to get them into the CPT process immediately after harvest. The logistics are challenging in any case, but the fact that they are grown at our doorstep in the mountains surrounding Chiang Mai, Thailand makes it all possible.

Higher Bioactivity Superior Efficacy

The objective achieved by CPT is preservation not only of the targeted ingredients but preservation of the entire cellular and molecular structure of the live plant. This is achieved by:

- An Evolutionary and Transitional Freeze Dry Process where the product is never exposed to the destructive oxidative forces of heat.
- Plant tissue fractures between/along the layers of the cell walls preserving cellular integrity and improving the retention of the bioactive intracellular contents.
- Water removed as a liquid at an extremely low constant temperature (minus 55 deg C) evaporates at a constant rate while the quantity of water steadily decreases. This creates surface tension. Any solid structure in contact with the water will normally experience surface tension strong enough to damage fragile cell walls; CPT removes water in its gaseous state (water vapor) and avoids this destructive surface tension.
- Exposure of the entire surface area to sublimation results in “even” drying which preserves cellular integrity.

The net result is preservation of the complex synergistic structure as close as possible to how it exists in nature. This translates to a more highly bioactive more effective powder.

Higher Absorption and Higher Bio-Availability

Particles break down inside the product chamber with minimal need for mechanical grinding. They break down due to the movement of the super frozen particles and sublimation of the ice structure that holds the particles together. This causes them to fall into small porous particles along the natural Cellular Lines creating soft, porous particles which have more surface area per unit of weight and therefore are absorb more easily.

The function and value of our food supplements lie not in lab tests alone, but in their energetic breakdown and uptake inside your body and the preservation of enzymes, proteins and vitamins.

The ability of your body to store or use these nutrients is called bio-availability – yet another huge advantage of our Cellular Preservation Technology activated botanicals.

The quality and effectiveness of our Products are the result of the remarkable protocols and processes we employ from the fields to the finished product. For details on this evolutionary process, please contact us at www.cptsuperherbs.com

Nutritional data (per 100g) of TFD Sprouted Black Rice Powder*:

Nutrient	Amount
Alanine	0.437 g
Arginine	0.569 g
Ash	1.27 g
Aspartic acid	0.702 g
Calcium, Ca	33 mg
Carbohydrate, by difference	76.17 g
Copper, Cu	0.277 mg
Cystine	0.091 g
Energy	1515 kj
Energy	362 kcal
Fatty acids, total	0.971 g
Fatty acids, total	0.959 g

Nutrient	Amount
Magnesium, Mg	143 mg
Manganese, Mn	3.743 mg
Methionine	0.169 g
Niacin	4.308 mg
Pantothenic acid	1.493 mg
Phenylalanine	0.387 g
Phosphorus, P	264 mg
Potassium, K	268 mg
Proline	0.352 g
Protein	7.50 g
Riboflavin	0.043 mg
Serine	0.388 g

Fatty acids, total saturated	0.536 g
Fiber, total dietary	3.4 g
Folate, DFE	20 mcg
Folate, total	20 mcg
Glutamic acid	1.528 g
Glycine	0.369 g
Histidine	0.190 g
Iron, Fe	1.80 mg
Isoleucine	0.318 g
Leucine	0.620 g
Lysine	0.286 g

Sodium, Na	4 mg
Thiamin	0.413 mg
Threonine	0.275 g
Total lipid (fat)	2.68 g
Tryptophan	0.096 g
Tyrosine	0.281 g
Valine	0.440 g
Vitamin B-6	0.509 mg
Water (added in the LAB to enable testing)	12.37 g
Zinc, Zn	2.02 mg

* Tested, approved and certified by Central Laboratory(Thailand) Co. Ltd.

DISCLAIMER

This brief is solely intended as a source of information and does not prescribe or advise the use of any substance mentioned herein. The authors do not intend to diagnose, cure, treat, or prevent any disease. The Food and Drug Administration of Thailand has not evaluated any statements made herein.

Consult with your doctor about all prescription and non-prescription medicines you take before you begin to use any herbal products and partner with your professional health care practitioner on determining your own health destiny.

If you are a pregnant, considering pregnancy or are a nursing mother you should consult your physician prior to using any health supplement product.