Introducing first time ever in the world, PHYCOCYANIN, a revolutionary wonder molecule for cancer care and support!

- Cancer suspected subjects
- Newly diagnosed cancer patients
- Patients already undergoing cancer treatment

A Natural
Hepatoprotective
Neuroprotective
Anti-Inflammatory
Anti-Cancer Molecule

A Molecule extracted from Spirulina platensis
A PRODUCT OF HASH BIOTECH LABS PRIVATE LIMITED

Introducing first time ever in the world, PHYCOCYANIN, a revolutionary wonder molecule for cancer care and support!
PHYCOCYANIN™ is a natural dietary supplement dedicated to assisting individuals who are undergoing cancer therapies including chemotherapy and radiation. Besides, it also has cancer fighting and cancer preventive attributes of its own. PHYCOCYANIN™ is a research innovation introduced by our team of world class researchers who harnessed the power of this wonder molecule from Spirulina platensis, one of the oldest species on this planet. Our advanced high through put technology evolving from the combination of the latest medical research and the hidden powers of the natural microalgae result in this specialized anti cancer dietary supplement that is a promising support in cancer fight. PHYCOCYANIN™ may be used to prepare for and ease negative symptoms during treatment as well as help the body revive and rejuvenate post treatment. PHYCOCYANIN™ is being presented with the essential levels of purity and consistency to combat cancer as well as other related medical complications arising due to cancer onset and to meet the unique needs of cancer prevention attributes.

**WHAT IS PHYCOCYANIN?**
Phycocyanin is an important molecule present in *Spirulina platensis*. It is a unique anti-cancer and cancer preventive molecule which has an excellent performing profile based on research proven scientific accreditations. It is a natural, water soluble and non-toxic molecule with potent anti oxidant, anti-inflammatory and anti-cancer properties. Various research studies also support strong cytoprotective, hepatoprotective and neuroprotective profile of phycocyanin. (Cheng and Wong 2008; Romay et al.2003; Vadiraja et al 1998)

**PHYCOCYANIN™ has 100% natural c-phycocyanin.**

**Why PHYCOCYANIN™?**
In the current times where dissipated lifestyle and other counting factors such as dietary, physical, mental mismanagements, drug administration intoxicifications in the form of chemotherapies and chemical toxicities are adding up to the cumulative risk of cancer occurrence, consumption of PHYCOCYANIN™ is essentially required. PHYCOCYANIN™ helps fight and revive against cancer and address other similar conditions which may deteriorate the quality of health. It provides protection and vitality to the body by boosting the immune system. Due to its strong anti-oxidant properties it detoxifies and rejuvenates the over all health profile.

PHYCOCYANIN™ is naturally designed to meet the unique needs of cancer prevention attributes and is being presented with the essential levels of purity and consistency. Zero toxicity and accomplished safety profiles of this wonder molecule, makes it a choice of health-conscious individuals as well as cancer fighting subjects without any hesitation.

PHYCOCYANIN™ has been acknowledged and recommended by oncologists and other medical experts. Thus far, many cancer specialists and other health-care providers have come up to recommend the wondrous PHYCOCYANIN™ for cancer combating as well as for general rejuvenation.

**Recommended By Doctors, Cancer Specialists And Experts**

**A PRODUCT OF HASH BIOTECH LABS PRIVATE LIMITED**

**First in the World to introduce PHYCOCYANIN - the wonder molecule.**

**A Molecule extracted from Spirulina platensis**

**WHY IS PHYCOCYANIN™ SAFE?**
PHYCOCYANIN™ has been acknowledged and recommended by oncologists and other medical experts. Thus far, many cancer specialists and other health-care providers have come up to recommend the wondrous PHYCOCYANIN™ for cancer combating as well as for general rejuvenation.
In cancer cells, the DNA is altered thus causing uncontrolled division. Cancer cells also generate reactive oxygen species endogenously to significant amounts which may be the cause of their excessive growth, elucidating the relation between the risk of carcinogenesis and reactive oxygen species (Szatrowski and Nathan, 1991).

Phycocyanin induces apoptosis in the existing and proliferating cancer cells and being a natural antioxidant, it also helps getting rid of any cancer promoting oxidative stress. Phycocyanin lowers the amount of cyclooxygenase-2 which is upregulated in cancer cells. It is established that Phycocyanin induces apoptosis in cancer cells by changing the Bcl-2/Bax ratio (Bcl-2 is an anti-apoptosis protein, Bax is a pro-apoptotic protein, the ratio of Bcl-2/Bax represents the degree of apoptosis) and the release of Cyt-c in the cytosol (Lu et al, 2011).

Phycocyanin scavenges free radicals and protects cells from damage which prevents or lessens the severity of a disease (Wang et al., 2007). Studies have shown that phycocyanin is an efficient scavenger of oxygen free radicals (Bhat et al, 2001) and also reacts with other oxidants of pathological relevance such as HOCl and ONOO-. Phycocyanin is one of its kind natural molecule which has an established cancer preventive attribute.

Phycocyanin's easy digestibility and water solubility, thus becoming a possible natural agent for reducing the harmful effects of oxidative stress without any risk or toxicity. Some of the other beneficial and important characteristics of Phycocyanin are as follows:

1. A pronounced cyto- and tissue-protective potential, in particular against oxidative stress.
2. Supports a healthy inflammatory response and neurological health.
3. An anti-oxidant potential due to multi-site actions such as neutralizing ROS.
NATURAL ANTI-INFLAMMATORY
Anti-inflammatory activity of phycocyanin both in-vivo & in-vitro has been reported to occur by inhibition of cyclooxygenase-2 (COX-2) activity or by inhibition of platelet aggregation (Romay et al). Phycocyanin has exerted anti-inflammatory effects in a dose dependent fashion. Phycocyanin reduced edema, histamine release, myeloperoxidase activity and the levels of prostaglandin and leukotriene in the inflamed tissues. These can be due to its scavenging properties of phycocyanin towards oxygen reactive species (ROS) and its inhibitory effects on cyclooxygenase-2 (COX-2) activity (Madyastha et al, 2000).

NATURAL ANTI-OXIDANT
Anti-oxidant potential of phycocyanin is mainly attributed to its phycobilisome (chromophore) moiety (Patel et al., 2006) and partially to its apoprotein counterpart (Apt et al., 1995) as the former shows high degree of conjugation of double bonds which stabilizes free radicals. It is well known that reactive oxygen species (ROS) are involved in a diversity of important processes in medicine including inflammation, atherosclerosis, cancer, reperfusion injury etc. Phycocyanin is able to scavenge these free radicals in the cells, protecting cells from damage which prevents or lessens the severity of the diseases (Wang et al., 2007).

Lipid peroxidation mediated by ROS is believed to be an important cause of destruction and damage to cell membranes. Research suggests that phycocyanin significantly inhibits CCl4 induced liver microsomal lipid peroxidation thus protecting the liver by preventing oxidative stress in hepatocytes acting as hepatoprotective molecule (Sathyasaikumar et al., 2007). Phycocyanin also inhibits microsomal lipid peroxidation induced by Fe+2 – ascorbic acid or the free radical initiator 2, 2’ azobis (2-amidinopropane) hydrochloride (AAPH) (Bermejo-Bescos et al 2008). Furthermore, it reduces carbon tetrachloride (CCl4)- induced lipid peroxidation.

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NATURAL NEURO-NEPHRO PROTECTIVE
A scientific study demonstrates that either the prophylactic or the therapeutic application of phycocyanin was able to significantly reduce the infarct volume, and also protect hippocampal neurons from death, induced by global cerebral ischemia/ reperfusion injury in gerbils (Penton-Rol et al, 2011). Studies reveal that phycocyanin is a potent platelet aggregation inhibitor with a potential to hamper arterial thromboembolism in conjunction with its neuroprotective ability. Antioxidant nature of Phycocyanin also protects against oxalate-induced nephron injury.

DETOXIFICATION AND ENZYME EXPRESSION
Phycocyanin has been shown to increase the expression of essential enzymes and biochemicals related to the balanced function of liver and Kidney. Phycocyanin has been documented to modulate the activities of Cyt p-450, Superoxide Dismutase, Catalases, Alanine Transaminases, Aspartate Transaminases (Ivanova et al 2010).

ADJUVANT CANCER THERAPY AND PALLIATIVE CARE
A further reason for using phycocyanin in cancer therapy is that the regular intakes of this molecule have been shown to boost immune responses. The particular types of immune cells involved in cancer control, cytotoxic T- lymphocytes and NK cells, function more effectively with increased intakes of phycocyanin (Arias et al, 2011). Therefore, the likely benefits of PHYCOCYANIN™ in clinical cancer therapy especially when used as an adjuvant to chemotherapy are: improved response of cancers to chemotherapy, increased capacity of the immune system to fight cancer spread; and reduced risk that chemotherapy may eventually give rise to a new cancer.

Disclaimer: This product is not intended to diagnose, treat, cure or prevent any disease. All information, data & claims presented are taken from secondary sources like research papers etc. published in various National & International Journals and Standard Textbooks. Hash Biotech Labs Pvt. Ltd. makes no claim for their authentication. Please consult your doctor before taking any food supplement.

ANTI-OXIDANT AND FREE RADICAL SCAVENGING

Phycocyanin may result, at least partially, from inhibition of prostaglandin E2 production and a moderate inhibition of phospholipase A2 activity. – Departamento de Farmacologia, Centro Nacional de Investigaciones Cientificas, Centro Nacional de Investigaciones Cientificas, Cuba – Arzneimittelforschung 2000 Dec; 50(12): 1106-9

The anti-inflammatory effect of microalgae spirulina was studied in Zymosan-induced arthritis in mice. The anti-arthritic effect exerted by spirulina as shown in this model may be at least partly due to the inhibition of prostaglandin E2 production and a moderate inhibition of phospholipase A2 activity. – Departamento de Farmacologia, Centro Nacional de Investigaciones Cientificas, Centro Nacional de Investigaciones Cientificas, Cuba – Inflamm Res 1998 Jan; 47(1): 36-41

The recombinant subunit of C-phycocyanin inhibits cell proliferation and induces apoptosis – Cancer Letters – Department of Biology, Georgia Cancer Center, Georgia State University, USA – Mol Cancer Ther. 2003 Nov; 2(11): 1165-70


HEPATOPROTECTION AND DETOXIFICATION

Phycocyanin and polysaccharides enhanced bone marrow reproduction, growth of thymus and spleen and biosynthesis of serum protein. – Pharmacology Department, National Center for Scientific Research, CNIC, Havana, Cuba. - Inflamm Res 1998 Jan: 47(1):36-41


Antioxidant nature of C-phycocyanin protects the renal cell against oxalate-induced injury and may be a nephroprotective agent. – Department of Medical Biochemistry, Dr. AL Mudalia Post-Graduate Institute of Basic Medical Sciences, University of Madras, Taramani, Chennai 600 113, India. – Clin Chim Acta. 2004 Oct; 348(1-2): 199-205


Phycocyanin and polysaccharides enhanced bone marrow reproduction, growth of thymus and spleen and biosynthesis of serum protein. – Pharmacology Department, National Center for Scientific Research, CNIC, Havana, Cuba. - Inflamm Res 1998 Jan: 47(1):36-41

C-flan protect cerebellar granule cells from the apoptosis induced by deprivation. – Unitat de Farmacologia I Farmacognosia, Facultat de Farmacia, Nucli Universitaris de Pedralbes, Barcelona, Spain. – Naumann Schmiedebergs: Arch Pharmacol 2001 Aug; 364(2): 96-104


CHAPTER 1

Phycocyanin, a novel hypocholesterolemic protein derived from spirulina platensis, can powerfully influence serum cholesterol concentrations and impart a stronger hypocholesterolemic activity than other polyssacharides and phycocyanin from spirulina on peripheral blood and hematopoietic system of bone marrow in mice. Second Asia Pacific Conf. Ibid, April, 1994


PHYCOCYANIN™ is a proactive technology innovation in the field of medical sciences, targeting both cancer prevention and cancer treatment. It is a wondrous food supplement for patients undergoing cancer treatment to help combat cancer as well as counter cancer related health challenges. PHYCOCYANIN™ is filling a huge void in the cancer supportive care expectations that the patients and the physician can rely upon.

RECOMMENDED DOSAGE
Two tablets a day per person or as directed by your physician.

The product comes in a tamper proof pack of 60 tablets each.

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