

Excerpt from Humic Substances manual...

Cancer is second leading cause of death in the US, humic extracts arrest cancer growth according to medical studies

According to the National Cancer Institute, about 1,228,600 new cancer cases were expected to be diagnosed in the year 2000. Since 1990, approximately 11 million new cancer cases have been diagnosed.

In the year 2000 about 564,800 Americans were expected to die of cancer, more than 1,500 people a day. Cancer is the second leading cause of death in the U.S., exceeded only by heart disease.

Patients with cancer causing tumors of the esophagus had 100% success rate in preventing tumor progression into the cancerous state when treated for two years with a humic extract solution.

Yuan, Shenyan; Fulvic Acid, 4 1988; in Application of Fulvic acid and its derivatives in the fields of agriculture and medicine; First Edition: June 1993

One of every four deaths in the U.S. is from cancer. Since 1990, there have been approximately 5 million cancer deaths. Overall annual costs for cancer run \$107 billion per year.

Breakthrough cancer research studies supported by the National Institute of Health clearly indicate that oxygen-containing molecules known as oxidants or free-radicals, play an important role in causing cancer, and that antioxidants or free-radical scavengers help suppress cancer.

In a surprising new development, the study shows that cancerous cells themselves are causing an overproduction of free-radicals. This alone can account for cancer's typical runaway cell growth.

Cancer cells have now been shown to produce oxidants that act as messenger molecules and send signals through protein pathways, bombarding surrounding cells uncontrollably with damaging free-radicals.

The study shows that certain super antioxidants work to obstruct the signaling protein pathways, neutralizing the spread of cancer and can potentially prevent it in the first place. Unique protein inhibiting antioxidants block the necessary signals that normally allow adjacent cells to become cancerous. Studies point to antioxidants as new anti-cancer treatment and prevention strategies.

Humic extracts (Fulvic acids) are nature's most powerful antioxidants. Pharmacological studies throughout the world have shown that various mechanisms within the humic molecular structure make it both a donor and acceptor free radical scavenger and antioxidant. Also noted are powerful superoxide dismutases (SODs) and metalloenzymes of every conceivable kind.

While all humic extracts do not always destroy cancer cells, they generally halt their growth and spread. Sometimes tumors disappear almost immediately and spontaneously. Humic extracts are certainly cancer preventative, and it is certain that the higher the quality of humic extract, the better the ability to reverse and completely cure cancers.

Outpatient medical hospital studies on thyroid tumors, some cancerous, showed that injections with a special humic extract was 90% successful in stopping tumor growth and diminishing size of tumors, with 80% of patients having complete cures.

He, Shenyi, et al; Humic acid in Jiangxi Province, 1 (1982)

It has been found that naturally-occurring humic acid preparations can stimulate the production of cytokines, including interferon-gamma, interferon-alpha, interferon-beta, and tumor necrosis factor-alpha. What this means is that a valid mechanism has been discovered, proven, and documented, whereby humic extracts are able to work with the body to selectively seek out and destroy cancer cells.

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Cellular regeneration attributed to Fulvic acid electrolyte

Living cells are single bipolar mechanisms, meaning they have a positive and negative composition, and work similar to batteries. Cells are made up of a positively charged acidic central core or nucleus, which is surrounded by the negatively charged alkaline cytoplasm. The components are separated by semi-permeable membranes. Each cell is a single structural unit that functions as a member of the total living

organism. Once a cell dies, and eventually in the natural scheme of things, comes into contact with the appropriate soil microbes, it will ultimately break down and turn into a humic substance.

Over 50% of hospital patients treated with humic acid for various chronic diseases noticed that they were able to sleep more relaxed.

Bingwen Su, Jiangxi Humic Acid, 3 (1985)

Research has shown that two very important components of humic substances are nucleic acids and amino acids, which are remnants from the nucleus, cytoplasm, and protein building blocks of once-living cells. Nucleic and amino acids are absolutely essential to all living things.

There are potentially thousands of individual nucleic and amino acids in humic substances. These nucleic and amino acids are preserved intact within humic substances, where they are believed to remain stable indefinitely. The nucleic acids consist of negatively charged DNA from the breakdown of the nucleus of cells, and positively charged RNA from the cytoplasm of cells, which also remain stable in humic substances.

Of interest here, are the nucleic acids and amino acids which are major constituents of the fulvic acid fraction of humic substances. Since fulvic acids are of low molecular weight, and water soluble on both sides of the pH scale, they are readily absorbed through semi-permeable membranes, and function actively in association with living cells.

Complexed into the fulvic, nucleic, and amino acid team, are innumerable essential minerals and rare earth elements. Fulvic acid contains literally hundreds of complex minerals which include traces of virtually every element listed in the Periodic Table. Together, all of these components function in unison, as fulvates (salts of fulvic acid), making fulvic acid an extremely powerful electrolyte.

Hospital studies show that patients with normally incurable epidemic Hemorrhagic Fever were able to be successfully treated with humic extracts, which stopped bleeding, restored circulation, removed clots, was anti-viral, and significantly bolstered and regulated the immune system.

Yinzhang Cui, Humic Acid, 1 (1991)

Because of its many nutritional components and electrolytic power, fulvic acid has instant cellular revitalizing, replenishing, and nourishing characteristics unlike anything else. Fulvic acid's electrolytic value also has been shown to increase permeability of bio-membranes, which means that it can sensitize cell membranes for better absorption or assimilation of other things in its presence.

It is essential that the electrical potential of all cells remain balanced and "charged". A high quality electrolyte is essential for proper cellular function. An electrolyte is a substance that dissolves in water or other suitable medium, that will conduct electrical current. An electrolyte is essential to cells because in molecular processes it permits electrons to be set loose, transferring electrical current, by allowing the flow of ions. Fulvic acid is a polyelectrolyte which means "much electric."

The value of an electrolyte can be shown by an experiment that was done by researchers on a giant amoeba, which is a microscopic single cell animal. Under a microscope the electrolytic potential of the amoeba, which is normally 20 millivolts, was depressed to zero. The researchers then noticed astonishing changes as the amoeba become dysfunctional, the outer membrane then ruptured in several places, and internal components began to flow out into the surrounding fluid. At that point researchers visually concluded that the form and structure of the amoeba had disintegrated and it was for all purposes dead. Upon increasing the electrolytic charge, the form of the amoeba reconstructed and became active and healthy again. This same test was repeated many times with the same results.

"The cell is immortal. It is merely the fluid in which it floats which degenerates. Renew this fluid at intervals, give the cells what they require for nutrition and, as far as we know, the pulsation of life may go on forever."

--Dr. Alexis Carrel, Nobel Prize in Medicine

Although plant and animal cells have slightly different makeup, leading scientists agree that their metabolic functions, components, and requirements are exactly the same. For instance; in plants there are chlorophyll molecules which are the light receptors responsible for the photosynthesis process. These chlorophyll molecules are very similar in structure to the heme molecule of human red blood cells (hemoglobin).

Extensive hospital eye clinic studies using humic extracts showed 100% success in curing eye diseases caused by virus, bacteria, or fungus, also healing ulcerous wounds, relieving inflammation, and stopping hemorrhaging, without side effects.

Guofan, Tang, Jiangxi Humic Acid, 3 (1984)

The physical health of all organisms, both plant and animal, can be expressed in terms of electrical potential. It is essential that the electrolytic potential of all organisms be maintained at optimum levels, otherwise weakness, degenerative disease, and eventual death will result.

Fulvic acid has been proven to be one of nature's most perfect and powerful organic polyelectrolytes. Because many of fulvic acid's constituents were once involved in photosynthesis, the fulvic retains that latent energy potential stored inside its solar charged molecular structure, which can balance cell life on the molecular level, providing regulated

positive and negative charges as needed, acting as both a donor or acceptor. Within the complexities of fulvic acids, the individual molecules are similar but not identical. This variation in makeup allows a variety of possible reactions, positive or negative, or in some cases alternating, to assist the balance.

Because of its unique polyelectrolytic properties, fulvic acid can influence the formation or transmutation of new species of metal ions. This means fulvic acid can convert existing minerals into new minerals.

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Common Virus Shows Link To Brain Cancer In Children

Colon, penile, uterine, cervical, liver, and numerous other cancers are also caused by viruses

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A new study appearing today in the Journal of the National Cancer Institute, shows that the JC Virus (JCV) which infects about 65% of children by age 14, likely plays a role in the development of the most common type of malignant brain tumor found in children. This finding is consistent with many other recent reports linking viruses to cancer.

The JC Virus is named after a patient, John Cunningham, from whom the virus was first isolated in the 1970's. According to the senior author of the study, Dr. Kamel Khalili, the JC Virus "is very common," and he went on to say that "sixty-five to 70 percent of human populations worldwide get infected with this virus by age 14, so we all basically have this virus in our bodies."

Twenty specimens of brain tumors taken from children showed evidence of the JC Virus. Dr. Khalili says that "the presence of the virus... is suggestive of a biological role for this virus in the development of these tumors." Khalili, who is a cancer researcher at Philadelphia's Temple University, said that earlier lab studies show that the JC Virus causes cancer in rats, mice, and brain tumors in certain monkeys.

The JC virus comes from a viral group called Neotropic Polyomaviruses. It usually infects the upper respiratory system by inhalation of airborne particles just like the common cold. Polyomavirus caused respiratory infections are very common in children. The virus causes no serious disease unless a person's immune system is weak. In patients with very weak or destroyed immune systems (such as AIDS patients, or those who are taking organ anti-rejection drugs), according to Dr. Khalili, the JC Virus can cause progressive Multifocal Leukoencephalopathy (PML), a fatal brain disease. Dr. Khalili says that evidence suggests that JC Virus also plays a role in the development of the most common brain cancer in children, medulloblastoma. This type of cancer is diagnosed annually in about one out of every 200,000 children under the age of 15. It is a very aggressive cancer that is difficult to treat and often is fatal. Dr. Khalili says that if it can be conclusively proven that JC virus does play role in the brain cancer, then it may be possible to develop a vaccine that could help in treating the tumor or preventing its spread.

Studies by Dr. L. Laghi and associates have shown that JC Polyoma Virus also causes colon cancer. In other extensive research Dr. Richard C. Hunt, at the University of South Carolina, has documented many other viruses as the cause for colon, penile, uterine, cervical, liver, and numerous other cancers.

This information provides support for the idea that humic substances (fulvic acids) are a little-known and important missing link throughout the food chain. Modern agricultural practices have eliminated the humic substances from farm soil, which parallels increases in viral plant, animal, and human viral infections. Common to rich organic soil humus, fulvic acids have been shown to have unequalled value in defending plants, animals, and man against viruses of all kinds, and also in significantly increasing and balancing immunity. Of interest is also the fact that hospital studies in China showed that children with serious respiratory infections responded exceptionally well to humic - fulvic extracts when nothing else seemed to work.