

HEALTH SCIENCES INSTITUTE

Special Research Alert

Beyond Chemotherapy

**New Cancer Killers,
Safe as Mother's Milk**

HSI

Health

Sciences Institute

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Cancer: one of the most feared diagnoses in medicine today and, unfortunately, one of the most common. Every day too many individuals hear the words, "You have cancer." The good news is that the majority of them will survive it. In fact, there are 10 million cancer survivors in the United States alone. Although cancer still ends lives prematurely, the rate of deaths from some important cancers is falling. With better and earlier detection as well as a wide range of conventional and alternative treatments, cancer is a treatable disease.

Although science is constantly improving and refining chemotherapy drugs and radiation technology, the success rates of these therapies could be better. Fortunately, there are gentler and even more effective ways of dealing with cancer. In the following pages, you will find the latest updates and latebreaking research on new breakthroughs in the fight against cancer.

1. The lactoferrin miracle

We're on the verge of a major medical breakthrough with lactoferrin.

Because of this unique extract, much of what we now consider state-of-the-art medicine -such as radiation, antibiotics, and chemotherapy-may eventually seem as primitive as bloodletting.

If lactoferrin proves to be as powerful as it promises to be, many deadly diseases that haunt our thoughts today will no longer frighten us.

Where does lactoferrin come from and how does it work?

From the moment you were born, lactoferrin-an iron-binding protein found in breast milk (colostrum)-was your first shield against infection and disease and your primary source of immune-system chemicals.

The primary task of your immune

system is to survey your body-organ by organ, tissue by tissue, cell by cell-to make sure that only the cells that are supposed to be there ... are. When a healthy immune system recognizes a foreign substance-a virus or cancerous cell-it immediately fights to eliminate it.

Researchers discovered the significance of lactoferrin to the immune system while researching another mysterious biological phenomenon: pregnancy.

What's so mysterious about pregnancy?

Until recently, scientists had been baffled by the fact that a woman's body doesn't normally reject a fetus, which naturally contains the foreign antigens of the father. But the puzzle is beginning to unravel: Science has discovered that shortly after conception, a woman's immune system is down-regulated.

This is why her body does not reject the fetus as "foreign" matter. (For this reason, pregnant women should not take lactoferrin.) Immediately after delivery, however, her body produces colostrum, or the first milk, which restores her immune system and provides powerful immune chemicals to the infant. Lactoferrin is the primary immune-system chemical in first milk.

Studies have shown that the mother's or first milk is the only source from which an infant can get these significant immune substances. Synthetic formulas can't offer the same nutritional, immunological, or physiological value, despite efforts to produce formulas that mimic breast milk as closely as possible.

How critical are these immune factors?

Scientists still haven't established all the long-term effects of formula feeding, but research has shown that, in both developed and undeveloped countries, infants who are not breast-fed suffer higher rates of childhood infections and tend to have higher incidences of iron-deficiency anemia. Studies also show that people with lactoferrin deficiencies succumb early in their lives to infections that most people routinely fight off.

But lactoferrin provides a unique benefit for people of all ages. As an adult, your body continues to produce this immune chemical. It's found in tears, perspiration, the lining of the intestinal tract, and the mucous membranes that line the nose, ears, throat, and urinary tract-any place that is especially vulnerable to infection.

It's also found in certain white blood cells, called neutrophils, that surround and kill bacteria and viruses. We know, for example, that a systemic bacterial infection is accompanied by a rapid rise in lactoferrin. Whenever your skin is cut, for example, white blood cells are drawn to the area, where they release granules containing lactoferrin. The lactoferrin binds to iron, which immediately halts the bacterial growth.

Lactoferrin also acts as an antioxidant-and, like any antioxidant, it works to prevent free radicals from destroying cells in your body.

Unraveling the healing mystery of lactoferrin

Lactoferrin has at least two specific immune-boosting functions:

- It binds to iron in your blood, keeping it away from cancer cells, bacteria, viruses, and other

pathogens that require iron to grow. The lactoferrin protein is able to sequester and release iron as needed, under controlled conditions. This property helps prevent harmful oxidative reactions, making lactoferrin a powerful antioxidant.

- It activates very specific strands of DNA that turn on the genes that launch your immune response. This is such a rare and surprising action that there is no other kind of protein like it. Lactoferrin is in a class by itself.

Lactoferrin also contains antibodies against a wide range of bacterial, fungal, viral, and protozoal pathogens. In effect, the lactoferrin protein backs budding cancer cells or bacteria into a corner ... starves them and sends out a signal to your white blood cells that says, "It's over here! Come and get it!"

State-of-the-art techniques in cellular and molecular biology have recently allowed us to isolate lactoferrin from the "first food of life." The commercially available preparation is in a form in which the food hasn't been chemically altered.

Widely used to support recovery from malignancies in animals

Numerous studies on rats and patient case histories have documented the benefits of lactoferrin in helping to combat many types of malignancies.'

Many holistic practitioners use it and achieve great effects by combining it with other immune-enhancing natural tumor-fighting therapies. In one case, a leukemia patient (labeled the worst case the Mayo Clinic had seen in 20 years) had his condition reversed on lactoferrin. His white blood count rose, and his problems disappeared. This seemingly "hopeless" case was transformed into a remarkable recovery.

Other case histories indicate that the negative effects of conventional treatments like chemotherapy and radiation are drastically reduced or eliminated with supplemental lactoferrin. (The amounts of lactoferrin used in these reported cases range from 500 to 1500 mg a day.) Again, it should be noted that lactoferrin appears to be perfectly safe, even in high doses.

What else can you use it for?

Other clinical and case studies have shown that lactoferrin...

- contains an anti-inflammatory molecule-

which means it can help if you suffer from the pain and debilitation of joint inflammation'

- plays a role in lessening ocular disturbance, which means it may help with vision problems⁴
- acts as a potent antimicrobial agent against *Candida albicans*⁵
- shows potent antiviral activity useful in reducing your susceptibility to viruses, including herpes and HIV

If you're wondering how safe lactoferrin is, remember that it is nontoxic and is well-tolerated by nursing infants.

Should you take it as a daily preventive?

There are many everyday threats that wear down the immune system—such as environmental toxins, emotional and physical stressors, and genetic problems. Taking 100 mg of lactoferrin each day at bedtime, however, can help upgrade your immune system, so you can take full advantage of your natural defenses in a world full of potential health

threats. For use in cancer recovery, up to 1500 mg a day can be taken without fear of side effects. And unlike penicillin or other synthetic drugs, your body will not become immune to the effects of lactoferrin, because it's something your body is familiar with and knows how to handle.

Since lactoferrin is a natural substance, large pharmaceutical companies aren't able to patent it and make millions. But it's available from a limited number of suppliers in the United States, and it shouldn't be overlooked as a powerful tool in the fight against serious diseases. The wonderful truth is that your body can fend for itself ... when given the chance. Lactoferrin can give it that chance, while adding a powerful healing kick to your immune system at the same time. If you're suffering from a serious illness, you should be working with a physician on a complete treatment program. For information on purchasing lactoferrin, refer to the Member Source Directory at the back of this report.

Glycoalkaloids: a new nonsurgical defense against skin cancer

Sooner or later, skin cancer affects nearly everyone. The removal of skin cancer lesions is one of the most common outpatient surgeries performed today. But before rushing into surgery, you (and your doctor) should know about an inexpensive, all-natural alternative that has been shown to completely remove some skin cancers in as little as three to four weeks, without a trace of scar tissue.

It has also been effective in removing precancerous *actinic keratoses-unsightly* patches of scaly, sun-damaged skin that can turn cancerous at any time. Within a few weeks, rough, uneven, skin can be smoothed and renewed.

The results are in you can use this therapy with confidence

There's no doubt that chemical compounds called glycoalkaloids, derived from the devil's-apple plant, can effectively remove skin-cancer lesions. An Australian study of 72 patients posted a 100 percent cure rate.¹ Unfortunately, there are drawbacks to the Australian product—although it is effective, it can be highly irritating to the skin and can take up to three

months to work. Moreover, it's very difficult to obtain outside Australia.

However, a leading American research laboratory made several important advances in the formulation of glycoalkaloid cream. The researchers created a new product called SkinAnswer that promised to be even more effective (and quicker) than the Australian prototype, as well as less irritating to the skin.

With the first clinical trials on SkinAnswer

The effectiveness of SkinAnswer in eliminating skin lesions

Type of lesion	Mean treatment period	Complete recovery
Basal Cell	27 days	78%
Squamous Cell	30 days	100%
Keratosis	31 days	72% (28% had partial recovery)

All results were confirmed by biopsy. In the cases where only partial recovery was achieved in the trial period, it was anticipated that continued use would eventually result in 100% remission rates.²

complete, the results have confirmed the preliminary reports beyond a doubt: It dissolved both basal-cell and squamous-cell cancers in as little as three to four weeks, with absolutely no scarring. It also painlessly removed precancerous actinic keratosis lesions. Patients and doctors who have used both SkinAnswer and the earlier Australian version report that SkinAnswer seems to work more quickly and with less pain and irritation.

It selectively targets cancer cells healthy cells are unaffected

Glycoalkaloids are produced in many fruits and vegetables as part of their defense against insects and animals. Historically, the use of glycoalkaloid-rich plants (members of the Solanum family) in the treatment of cancer dates to the second century.

As a treatment for skin cancer, glycoalkaloids are thought to work by exploiting structural differences between healthy and abnormal skin cells. As skin cells change from healthy to cancerous, the cell wall becomes more permeable, allowing glycoalkaloids to penetrate into abnormal cells. Once inside the cell wall, glycoalkaloids release enzymes that literally digest the cells from the inside out. Under a microscope, the cells appear to explode.

As the abnormal cells die, they're replaced by normal, healthy skin cells that don't absorb the glycoalkaloids and are spared their destructive effects.

In any cancer therapy, the ideal is a "targeted therapy"-one that attacks cancer cells and spares healthy ones. It appears that SkinAnswer does precisely that. When it's applied to a cancerous lesion, you are likely to notice redness and inflammation-and even a burning sensation-indicating that the

Note: In the treatment of active lesions (basalcell and squamous-cell cancers) with SkinAnswer, some temporary discomfort is to be expected. However, it appears to be far less uncomfortable than Efudex-commonly prescribed as a topical chemotherapy for skin cancers. One patient remarked, "If this were Efudex, I'd be screaming by now." In addition, SkinAnswer was effective on lesions that had been unsuccessfully treated with Efudex. SkinAnswer is essentially painless to use for keratoses and other cosmetic applications.

cancer cells are being destroyed. An ulceration, or opening in the skin, may develop as the lesion begins to slough off.

These diseased cells will quickly be replaced by healthy ones, which are unaffected by the glycoalkaloid cream. In fact, you will know that the treatment is complete when the cream no longer produces a reaction, indicating that all of the skin-cancer cells have been replaced by normal healthy cells.

To use on squamous-cell or basal-cell skin cancers, apply SkinAnswer to the area twice a day, as directed on the package. Before reapplication, rubbing the area with a washcloth to remove dead skin layers will speed the healing process. Treated areas should be left uncovered if possible. (Covering the treatment area with a bandage seems to increase the amount of irritation to the skin and may actually slow the speed of treatment.)

Get rid of that "suspicious" spot before it becomes cancerous

In addition to having a dramatic effect on skin-cancer lesions, glycoalkaloids can act as natural exfoliants that smooth rough, uneven, or raised skin condition.

Dr. Margaret Olsen, who headed the initial clinical trial, noted, "This study began as a search for treatment for basal- and squamous-cell cancers, but evolved into a more effective treatment for actinic [sun-damage-related] keratoses."

Several of the trial participants, in addition to having skin cancers, had extensive areas of sun damage, resulting in raised, scaly patches of actinic keratosis. According to Dr. Olsen, these patients came for treatment of one or two symptomatic lesions but actually had thousands of them. The participants were, as Dr. Olsen noted, "generally oblivious to the extent of their sun damage."

In addition to treating the active lesions as part of the trial, the researchers also applied SkinAnswer to wide areas of sun-damaged skin. The result was easy and painless exfoliation of the keratoses, leaving smooth skin after a few weeks. These findings were confirmed by other researchers. With the ease and cost-effectiveness of SkinAnswer, there is no longer any reason to "watch and wait." Precancerous lesions can be removed immediately before the situation becomes

more serious.

Other noncancerous, raised skin growths, such as moles, skin tags, and even "liver spots," can be effectively and painlessly removed by SkinAnswer's powerful exfoliating action. Although these irregularities usually pose no threat of cancer, you may wish to remove them for cosmetic reasons. As compared with elective cosmetic surgery, glycoalka

loids provide an extremely cost-effective alternative. Other treatment applications under investigation include the treatment of acne and psoriasis and cosmetic use against wrinkles.

SkinAnswer is available through some pharmacies and by mail order. (See the Member Source Directory for details.)

3. Modified citrus pectin: halt the most lethal process on earth

Metastasis has been referred to as the most lethal process on earth. If it happens in your body, most doctors will consider you a grim case, at best, because it refers to the spread of tumor cells from their point of origin (say, the prostate) to other organs in your body (say, to your lungs). Rarely do cancer patients die before their cancer has begun to reach out to other body parts (or metastasize). Once cancer has begun to metastasize, however, it's not easy to stop.

Traditional weapons against metastasis—surgery, radiation, and chemotherapy (the slash, burn, and poison paradigm)—are generally considered "hit or miss." For some cancers, they may work fairly well, but even doctors who use standard treatments admit it's very difficult to target these therapies effectively. In actuality, surgery itself may cause the cancer to spread if the process hasn't already started. Radiation and chemotherapy, meant to kill wandering cancer cells, are not discriminating and kill healthy cells in the process.

The side effects of these essentially unproven treatments can include nausea, weight loss, depression, and even a critically weakened immune system. But do they work?

The truth is that, despite billions of dollars spent, death rates for the major killers—lung, breast, and colon cancers—have remained essentially the same or have increased since the turn of the century. According to the U.S. National Cancer Institute, five-year relative survival rates for cancer have barely budged in the past 20 years.

Finally, scientists are finding answers to important questions about the mechanisms of cancer activity, including metastasis. Research has revealed that cancer cells require special connections with normal cells in order to establish new tumor-cell colonies

in other areas of the body. Various stages of this process are mediated by cell-surface components, such as carbohydrate-binding proteins.¹

Researchers have discovered that modified citrus pectin (MCP), which is rich in certain simple sugars, acts as an "antiadhesive agent" to prevent the cell interactions necessary for the transport and growth of tumor cells to secondary sites in the body. Simply put, MCP targets compounds in your body that help tumor cells grow and spread.

Research results are pouring in

Studies confirm that modified citrus pectin is the first nontoxic therapy that naturally and specifically interferes with metastasis, one of the most lethal processes on earth.

Prostate cancer

In an experiment at the University of Michigan Medical Center, rats were injected with a million prostate-tumor cells. Normally, metastasis would occur 10 to 12 days after injection and they would die 13 to 15 days after the cancer had affected the lungs and lymph nodes.

In this study, the experimental animals received varying concentrations of modified citrus pectin in their drinking water. Some were given no MCP, some received 0.1 percent MCP, and some received 1.0 percent MCP. There was a significant reduction in lung cancer in the animals given MCP in their drinking water for 30 days. While 15 of 16 receiving no MCP developed lung cancer in that time period, only half of those receiving 0.1 percent MCP developed lung metastases. And only one of

the rats receiving the 1.0 percent MCP solution developed lung metastases.²

Lymph-node metastasis was also significantly reduced. Whereas 55 percent of the control animals developed lymph-node disease, only 13 percent of those treated with modified citrus pectin did. No toxicity was reported in any of the animals.

And the truly promising-and fascinating-news is this: The cancer-causing compound that MCP destroys in rat prostate cancer cells (galectin³) is also present in human tissues, including human prostate tumors. In other words, MCP may prove to work exactly the same way in human male prostate tumors as it does in rat prostate tumors.

Skin cancer

Skin cancer is the fastest-growing cancer in the world. MCP may one day help us slow the progress of this deadly disease. In a study where they also injected MCP, metastasis was decreased 90 percent. In those mice who did not receive MCP along with the cancer-causing substance, tumor

colonies increased as much as 300 percent.³

Immune function

A number of published papers show that MCP not only inhibits the growth and spread of cancer cells but also augments your body's natural immune response.

There is also evidence from tissue-culture studies, conducted at the Max Planck Institute in Tübingen, Germany, that MCP can enhance the activity of the body's own killer cells.

Important note: Don't confuse MCP with natural citrus pectin (the kind that is commonly available in health-food stores). MCP has been tested extensively against natural citrus pectin, and the studies have shown that the latter does *not* have the same immune boosting, cancer-killing effects.

To find out where you can obtain MCP, refer to the Member Source Directory at the back of this report. The recommended amount is 15 grams (or 3 rounded teaspoons) per day.

4. Guacatonga-breakthrough from the Amazon

Maybe you've heard of Taxol®. It's a prescription drug used to fight cancer, particularly cancer of the ovary, breast, and lung.

But what you might not know is that Taxol is derived from a plant source: the bark of the Pacific yew tree. Researchers first identified the bark's anti-tumor potential in 1963-and then it took the pharmaceutical industry nearly 30 years to bring Taxol to market.

Now, we've learned that the same forces that developed Taxol are on the trail of a new novel cancer-fighter. That's good news for cancer patients-but it gets even better. We've got a direct route to the natural source, so you don't have to wait a decade or more while the drug companies wade through red tape. And, through a special arrangement, we can make this promising new anticancer therapy available right now to those who need it most.

Research shows plant from the Amazon can fight cancer

Casearia sylvestris is the Latin name for a small tree that grows in the wilds of the Amazon.

It's been known by a variety of other names in various cultures, but it's perhaps best known by the name guacatonga. The bark, leaves, and roots of this tree have long been part of the herbal medicine traditions in the lands where it grows. But it's the leaves and twigs that have caught the attention of some of the mainstream's heavy hitters-groups like the National Cancer Institute, Research Triangle Institute (the group that uncovered the power of the Pacific yew), and Bristol-Myers Squibb (the pharmaceutical company that produces Taxol).

The February 2002 issue of the *journal of Natural Products* includes a study funded by an NCI grant and administered by scientists from RTI and Bristol-Myers Squibb, along with researchers from the University of Illinois at Chicago and a university in Ecuador. The study identifies "three novel clerodane diterpenoids" in guacatonga that show "promising bioactivity," particularly in tests against a variety of tumor cell lines.'

The science behind guacatonga is quite complex, and so is the trail of research on the plant that spans nearly 20 years. Like this new study, most of it

focuses on clerodane diterpenoids, a class of hydrocarbon compounds found in many types of plants.

A group of scientists at the Tokyo College of Pharmacy were actually the first to find the clerodane diterpenoids in guacatonga. In 1988, these researchers identified three unique clerodane diterpenoids in the plant, which they labeled casearins A, B, and C. Then they conducted a series of animal trials to assess the efficacy of these casearins against cancer. They tested an ethanol-based casearin extract against sarcoma and various other human cancer cell lines. And in all cases, they reported that the guacatonga showed promising cytotoxic and anti-tumor activity.² In fact, the scientists were so encouraged by their findings that they filed a Japanese patent on the three clerodane diterpenoids they found in the plant.

For some unknown reason, the Japanese scientists never pursued their patent. But because it remained in place, other research groups were reluctant to pursue further study on guacatonga until now. The RTI research identified three new clerodane diterpenoids, which they labeled casearvestrins A, B, and C. And the effects of these three newly discovered compounds were quite impressive. All showed cytotoxic effects against lung, colon, mouth, and ovarian cancer cells in laboratory tests, when compared to controls.'

about exactly how the phytochemicals in this rain-forest plant fight cancer. Some studies have suggested that the clerodane diterpenoids in the plant may kill cancer cells by damaging their DNA." Another study found that the leaves and twigs of guacatonga contain another phytochemical called lapachol, the active ingredient in yet another Amazonian anti-cancer plant called pau d'arco.

New trial gives direct access to guacatonga right NOW

All this is very interesting ... but how can it help you? Even with promising results like these, we're years away from seeing RTI and Bristol-Myers Squibb translate this information into treatment. After all, it took them almost 30 years to develop Taxol.

But if you're fighting cancer now, you don't have to wait. At least, not for long. Because when HSI panelist Leslie Taylor learned about the work being done with guacatonga, she started doing some work of her own. She learned that the shamans of Indian medicine had been using the plant for centuries to treat all manner of ailments, including ulcers, inflammation, pain, and snake and insect bites. She learned that research by Brazilian scientists have found no evidence of any

More pieces in guacatonga's healing puzzle

While research into guacatonga's anticancer benefits lay dormant, scientists continued to study the plant's other medicinal uses. And they found compelling evidence to support guacatonga's healing power in a number of areas.

In traditional herbal medicine, guacatonga has long been a remedy for stomach ailments and ulcers. Now modern science supports that claim. In a Brazilian trial, researchers found that guacatonga extract was as effective as several prescription drugs in preventing stress-induced stomach ulcers in laboratory mice. They determined that guacatonga protected against ulcers by inhibiting gastric secre

tions and reducing hydrochloric acid output.'

Guacatonga is also traditionally used to treat bites from poisonous snakes and insects—a common problem in the rainforests of the Amazon. Researchers have found significant evidence to support this application. Scientists at the Universidade Federal de Uberlandia in Brazil, found that guacatonga extract significantly inhibits phospholipase A2 (PLA2), an enzyme that is widely distributed in venoms. In laboratory tests, guacatonga effectively inhibited the anticoagulant activity of PLA2 and partially reduced the swelling associated with snake bites.⁶

Phospholipase plays many roles in the body, and guacatonga's ability to inhibit this enzyme may explain many of its beneficial effects. For example, PLA2 is also present in digestive pancreatic secretions—a possible link to guacatonga's benefits in combating stomach ulcers. Another type of PLA2 (known as PLA2 Type II) is thought to play a role in the genesis of inflammation, and another type of phospholipase, *Type C*, is a highly toxic secretion of some disease-causing bacteria.

Although researchers don't understand how all the pieces fit together, it's clear that guacatonga contains some powerful phytochemicals.

There are still many unanswered questions

toxicity or side effects from the plant. And she located a source for guacatonga in its natural state, a source that can provide the plant's power right away.

Early imports available to select few

In February 2003, Raintree Nutrition, Inc., had just begun to import guacatonga and was still working out the details of production. Ms. Taylor expected the product to be ready soon, but in the meantime, she offered it on a limited basis to those who may need it the most.

She recruited 15 doctors from across the country to participate in an informal trial of guacatonga on sarcoma patients. Remember, the original Japanese research back in 1988 showed that guacatonga was effective against sarcomas in laboratory mice. And sarcomas are some of the deadliest of all

human cancers, so finding potential treatments for its victims is even more critical. Ms. Taylor agreed to provide a free supply of guacatonga to these patients, and their doctors agreed to track their progress over a 90-day course of treatment and supply the results to Raintree. Through special arrangement with HSI, Ms. Taylor extended this offer to our members and their loved ones as well. See the Member Source Directory at the back of this report.

Tracking the trial results

Results on the Raintree guacatonga trial should be available by the time Raintree is prepared to offer guacatonga to a wider audience. In the meantime, we're hopeful that this new discovery will make a difference for these sarcoma patients-and in the near future, for many other people as well.

5. "Off the shelf"

One of the best known natural therapies for liver disease may hold the key to fighting today's most common and dreaded cancers.

Silymarin, a constituent of milk thistle (and artichokes), has been used for 2,000 years to treat liver disorders-and that's still what it's most commonly known for today. But in 1994 researchers discovered that it was also a powerful killer of colon and skin cancer.^{1,2} Since then, laboratory tests and animal studies have shown silymarin's anticarcinogenic effect against breast and prostate cancers, as well.'

The most convincing study HSI found stated that silymarin "exerts exceptionally high to complete anticarcinogenic effects" against epithelial cells, which can develop into breast cancer.'

Although many studies of herbs center around their eventual development into prescription drugs, one of the researchers participating in several of the silymarin stud

cancer cure emerges

ies says that you can get "cancer prevention by dietary agents." That means milk thistle products already on store shelves may help battle cancer.

Milk thistle can be purchased at most vitamin or health food stores. Be sure to buy a standardized version that's at least 80 percent silymarin. It's available in capsules, tea, or edible seeds.

Note: If you're already suffering from cancer or under a physician's care, check with him or her before taking this or any other herb. Studies show that some chemotherapy agents have a synergistic effect with silymarin and may increase the drug effects. If you're taking drugs known to cause liver damage (like statin drugs or acetaminophen), milk thistle may help repair and prevent future damage. Again, remember to check with your doctor before supplementing. For ordering information see the Member Source Directory.

6. Hybridized mushroom extract

destroys cancer cells and provides powerful immune protection

Until now, the only way to get access to this remarkable immune booster was to live in Japan. For the last five years in Japan, people with cancer, AIDS, and other life-threatening illnesses-as well as healthy people who want to stay that way-have been revving up their

immune systems, destroying tumor cells, and preventing cancer and other illnesses with a powerful extract called AHCC (activated hexose correlate compound). Now, AHCC is available to consumers in the United States.

AHCC is an extract of a unique hybridization

of several kinds of medical mushrooms known for their immune-enhancing abilities. On their own, each mushroom has a long medical history in Japan, where their extracts are widely prescribed by physicians. But when combined into a single hybrid mushroom, the resulting active ingredient is so potent that dozens of rigorous scientific studies have now established AHCC to be one of the world's most powerful-and safe-immune stimulators.

In vitro, animal, and human studies confirm that AHCC effectively works against and, in some cases, even prevents the recurrence of liver cancer, prostate cancer, ovarian cancer, multiple myeloma, breast cancer, AIDS, and other life-threatening conditions, with no dangerous side effects.¹ In smaller doses, AHCC can also boost the immune function of healthy people, helping to prevent infections and promote well-being.

Many health problems, including those previously thought to be unrelated to the immune system, are now known to result from some degree of immune deficiency. Subtle to severe immune dysfunction can combine with other factors to cause many illnesses, including:

- Recurrent infections, • Slow healing wounds such as colds, flu, and parasites
- Digestive problems
- AIDS
- Gum disease • Multiple sclerosis
- Heart disease • Auto-immune illnesses
- Peptic ulcer • Cancers

The cutting edge in medicine today is to shift away from disease-specific interventions and focus on the fundamental, underlying causes of health and disease: the proper functioning of interdependent body systems, such as the nervous system, the endocrine system, and the immune system.

Calling up your first line of defense

Our immune systems stand between us and the rest of the world. Without it, our bodies would be overrun by bacteria, viruses, parasites, fungi, and other invaders, infections would rapidly spread, and cancer cells would proliferate. Like a highly responsive and well-coordinated army, our immune systems are composed of a variety of specialized immune cells that identify, seek out, and destroy microbes, pathogens, and tumor cells.

First on the scene of possible trouble are the phagocytes and natural killer (NK) cells, which respond

quickly to potential threats. Often referred to as the body's "front-line defense," these cells are constantly on the look out for any suspicious substances. NK cells latch onto the surface of substances or the outer membranes of cancer cells and inject a chemical hand grenade (called a granule) into the interior. Once inside, the granules explode and destroy the bacteria or cancer cell within five minutes. Itself undamaged, the NK cell then moves onto its next victim. In its prime, a NK cell can take on two cancer cells at the same time, speeding up the process.

Recent research shows that as we age, our immune systems function less efficiently. In particular, the ability of our NK cells to respond quickly and effectively declines with age and illness. When NK cells lose their ability to recognize or destroy invaders, health can deteriorate rapidly. Moderately low to dangerously low NK cell activity levels have been found in people with AIDS, cancer, immune deficiency, liver disorders, various infections, and other diseases. Because measurements of NK cell activity are closely correlated with one's chances of survival, anything that helps increase NK cell activity may help people treat, recover from, and/or prevent these illnesses.

Research finds remarkable immune system boost in multiple ways

Scientific studies of the extract AHCC, published in respected peer-reviewed journals such as *International Journal of Immunology*, *Anti-Cancer Drugs*, and *Society of Natural Immunity*, have established the health benefits and safety of AHCC more conclusively than nearly any other natural supplement.¹⁻⁴ What is especially remarkable about AHCC is that it consistently and effectively boosts immune system function. Specifically, AHCC:

- Stimulates cytokine (IL-2, IL-12, TNF, and INF) production, which stimulates immune function.
- Increases NK cell activity against diseased cells as much as 300 percent.
- Increases the formation of explosive granules with in NK cells. The more ammunition each NK cell carries, the more invaders it can destroy.
- Increases the number and the activity of lymphocytes, specifically increasing T Cells up to 200 percent.
- Increases Interferon levels, which inhibits the replication of viruses and stimulates NK cell activity.

- Increases the formation of TNF, a group of proteins that help destroy cancer cells.

These dramatic immune effects translate into profound health benefits. A 1995 clinical trial reported in the *International Journal of Immunotherapy* showed that 3 grams of AHCC per day significantly lowered the level of tumor markers found in patients with prostate cancer, ovarian cancer, multiple myeloma, and breast cancer. This study documented complete remissions in six of 11 patients and significant increases in NK cell activity in nine of 11 patients. T and B cell activity levels also rose considerably.'

AHCC shown to prevent the recurrence of liver cancer

The latest, and most extraordinary AHCC research results were presented at the 33rd Congress of the European Society for Surgical Research in 1998, regarding the treatment of liver cancer.' Liver cancer was the fifth most prevalent type of cancer worldwide the prior year, yet it is fourth in terms of mortality. This difference reflects the extremely poor prognosis for this cancer, with survival rates currently only at three to five percent.

In this study, 121 patients with hepatocellular carcinoma (liver cancer), who all had their tumors surgically removed, were divided into three groups. Group A (38 patients) took 3-6 grams of AHCC per day after surgery. Group B (18 patients) began taking AHCC after recurrences of their cancers were verified. Group C (the remaining 65 patients) took a placebo.

One year after surgery, blood levels of tumor markers were significantly lower in Group A (those taking AHCC right after surgery) than in Groups B and C. After approximately three to four years (depending on when each patient entered the study), the survival

rate of Group A was much higher than the survival rate of Group C (placebo).¹ Not only did many Group A patients survive longer than patients in the other two groups, many remained entirely free of liver cancer.

AHCC now available in the United States

There are many immune stimulators on the market today, some backed by research documenting increases in NK cell activity. AHCC is one of the few that has shown the ability to promote cancer remission in human clinical trials.

With results this powerful, many people without cancer or other life-threatening illnesses, such as AIDS, also choose to take AHCC to stave off flu, herpes, and other infections, as well as to fight cancer.

After years of successful use in Japan, AHCC is available in the United States as the active ingredient in a product called ImmPower. Distributed by American BioSciences, ImmPower comes in gelatin capsules containing 500mg of AHCC (proprietary blend).

ImmPower can be taken in preventive or therapeutic doses and should be discussed with your personal physician. For prevention, the recommended dose is one gram per day taken as one 500mg capsule in the morning and again at night. This dose will help increase NK cell activity and support immune system functioning for good health and general well-being. For those with cancer, AIDS, or other life-threatening conditions, the research indicates a therapeutic dose of two capsules in the morning, two at mid-day and two at night for a total of 3 grams per day to jump start NK cell activity. After three weeks, the dose can be reduced to 1 gram per day (one capsule in the morning and one at night), to maintain the increased NK cell activity level. See the Member Source Directory for purchasing information.

7. News of astounding natural cancer killer nearly squashed forever

Recently, Health Sciences Institute uncovered a remarkable story about a natural cancer killer that had been kept under lock and key for over 20 years. With this information, the future of cancer treatment and the chances of survival look more promising than ever. There's a healing tree that grows deep within the Amazon rainforest in South America that could literally change how you, your doctor, and possibly the

rest of the world think about curing cancer.

Since the 1970s, the bark, leaves, roots, fruit, and fruit seeds of the Amazonian Graviola tree have been studied in numerous laboratory tests and have shown remarkable results with this deadly disease.

Several years ago, a major pharmaceutical company began extensive independent research on it. They learned that certain extracts of the tree actually

seek out, attack, and destroy cancer cells. Because the natural extracts themselves could not be patented, the company labored to create a synthetic copy that showed the same promise.

After more than seven years of work behind closed doors, researchers at this company realized they couldn't duplicate the tree's natural properties with a patentable substance. So they shut down the entire project. It basically came down to this-if they couldn't make huge profits, they would keep the news of this possible cure a well-guarded secret. But one researcher couldn't bear that, and decided to risk his job with the hope of saving lives.

Seven years of silence broken

This conscience-driven researcher contacted Raintree Nutrition, a natural products company dedicated to harvesting plants from the Amazon. In the course of working with Raintree on another story, they shared the exciting Graviola breakthrough with us.

Since then, we've been looking closely into the research to date on Graviola. One of the first scientific references to it in the United States was by the National Cancer Institute (NCI). In 1976, the NCI showed that the leaves and stems of this tree were effective in attacking and destroying malignant cells. But these results were part of an internal NCI report and were, for some reason, never made public.'

Since 1976, there have been several promising cancer studies on Graviola. However, the tree's extracts have yet to be tested on cancer patients. No double-blind clinical trials exist, and clinical trials are typically the benchmark mainstream doctors and journals use to judge a treatment's value. Nevertheless, our research has uncovered that Graviola has been shown to kill cancer cells in at least 20 laboratory tests.

The most recent study, conducted at Catholic University of South Korea, revealed that

two chemicals extracted from Graviola seeds showed comparable results to the chemotherapy drug Adriamycin when applied to malignant breast and colon cells in test tubes .2

Another study, published in the *journal of Natural Products*, showed that Graviola is not only comparable to Adriamycin-but dramatically outperforms it in laboratory tests. Results showed that it selectively killed colon cancer cells at "10,000 times the potency of Adriamycin."³

Perhaps the most significant result of the studies we've researched is that Graviola selectively seeks out and kills cancer cells-leaving all healthy, normal cells untouched. Chemotherapy indiscriminately seeks and destroys all actively reproducing cells, even normal hair and stomach cells, causing such devastating side effects as hair loss and severe nausea.

Grown and harvested by indigenous people in Brazil, Graviola is available in limited supply in the United States and is distributed through Raintree Nutrition. But now, you can be among the select few in the entire country to benefit from this powerful treatment. We encourage you to consult with your doctor before beginning any new therapy, especially when treating cancer.

Graviola has been combined with seven other immune-boosting herbs in a product called N-Tense. As a dietary supplement, you should take six to eight capsules of N-Tense per day. Graviola and N-Tense are completely natural substances with no side effects apart from possible mild stomach upset at high dosages (in excess of 5 grams) if taken on an empty stomach.

If you've been diagnosed with cancer, you and your doctor should look into all the available treatment options. Graviola could just make all the difference in beating cancer. See the Member Source Directory at the back of this report for ordering information.

8. Discover the cancer fighting potential of Brazil's "Mushroom of God"

Nearly 30 years ago researchers began investigating a medical curiosity among the people of Piedade, Brazil. Residents of the small community near Sao Paulo enjoyed extraordinarily good health. They developed few diseases and lived unusually long lives. Outsiders began to wonder what was enhancing the Brazilians' immunity

and lifespan. In their quest for an answer, researchers stumbled upon the "Mushroom of God."

Depending on which account you believe, it was either two researchers from Penn State or Taktoshi Furumoto, a Japanese farmer living in Brazil, who solved the puzzle. He (or they) zeroed in on a small,

wild mushroom that locals ate regularly, believing it fostered good health. It was commonly known as Cogumelo de Deus or Cogumelo do Sol-Mushroom of God or Mushroom of the Sun.

Regardless of who discovered it, it was Japanese researchers (doctors from Tokyo University and Japan's National Cancer Center, in particular) who eventually subjected the mushroom to pharmacological testing. They reported that the mushroom, which eventually acquired the botanical name *Agaricus Blazei Murill* (ABM), could be a potent immune-builder and cancer-fighter.

To date, ABM has not been used in any human clinical trials. All research has been performed in petri dishes or laboratory animals. However, news of this rare medicinal mushroom has already prompted between 300,000 and 500,000 Japanese people to supplement with ABM, hoping to prevent cancer or stop the disease from recurring. Numerous others consume it regularly reportedly to avoid infection, diabetes, hyperlipidemia, chronic hepatitis, and arteriosclerosis.

ABM enhances the immune response to protect you from cancer

In recent years, Japanese research has confirmed that ABM contains a host of health-promoting components: vitamins B₁ and B₂, niacin, phosphorous, iron, calcium, protein, amino acids, and ergosterol (which converts into vitamin D₂ when the mushroom is dried). But most importantly, the researchers discovered that ABM contains large quantities of active polysaccharides -complex carbohydrates, most commonly found in foods like wheat, rice, and potatoes that stimulate the immune system to fight off bacterial and viral illnesses.'

ABM stimulates the immune system by triggering the production of

- T -cells, which directly attack cells that have been taken over by viruses or cancers²
- Interleukin, which bolsters the immune system by stimulating the growth and activity of white blood cells
- Tumor necrosis factor (TNF), which activates white blood cells and fights tumors
- Macrophages, which protect the body from infection by consuming foreign material.'

Obviously, a list of *in vitro* and animal studies (with no human trials in the mix) is not proof that ABM is an effective cancer treatment. Products,

whether they are natural or pharmaceutical, need to pass more extensive and rigorous testing to support such a claim.

In several studies, however, ABM has stimulated animals' immune systems and arrested the growth of their tumors. And in the past, HSI has documented the ability of other medicinal mushrooms, such as AHCC, to build immunity and help people fight cancer (see Chapter 6 of this report or search online at www.HSIBaltimore.com). We don't know yet if ABM will eventually rank with those health-promoting mushrooms. But the preliminary evidence was compelling enough that we decided to analyze it and report the findings to you.

Retard tumor growth by 90 percent in just three weeks

At Japan's Ehime University School of Medicine, researchers tested ABM's impact on tumors. Twenty days of treatment with certain ABM extracts (800 mg/kg per day taken orally) retarded tumor growth in cancerous mice between 80 and 90 percent. The researchers determined that the tumor-retarding agent was ergosterol, a steroid alcohol that occurs naturally in mold and yeast.

So they conducted a second experiment, giving oral doses of ergosterol (between 100 and 800 mg/kg) daily to tumor-bearing mice for 20 days. The treatment "significantly reduced tumor growth" in a dose-dependent manner. Mice given the largest doses experienced 85.5 percent less tumor growth than mice treated with placebos. The ergosterol, however, did not destroy cancer cells directly. Instead, it inhibited the development of new blood vessels within the tumor-a process that can stop and eventually reverse tumor growth. The treatment also produced another benefit: After 20 days of treatment none of the mice were suffering any of the side effects typically induced by chemotherapy drugs.'

Using guinea pigs as guinea pigs

Cancerous guinea pigs experienced even greater recovery rates-over 99 percent-when they were treated with ABM. Researchers from Tokyo College of Pharmacy, Tokyo University, and Japan's National Cancer Center Laboratory injected cancer cells into the femur (thighbone) of each pig-a procedure that normally causes cancer to spread throughout the animal's body within four to five weeks.

Twenty-four hours later (once the cancer cells were embedded in the animals' tissue), the researchers gave the pigs ABM injections and continued to give them daily injections for 10 consecutive days. Five weeks later, 99.4 percent of the guinea pigs had fully recovered from the cancer.

Other scientists tested ABM's ability to fight cancer by first injecting tumor cells in both the right and left flanks of laboratory mice. The scientists then injected ABM fractions into the mice, but only into their right-flank tumors. The injections inhibited tumor growth in the right flank, and even caused regression in some cases. But the treatment also inhibited growth of left-flank tumors. The researchers who were based at Japan's Miyagi Cancer Center Research Institute, speculated that the ABM had triggered the immune system to unleash more white blood cells to all cancerous areas, not just those specifically injected with the extract.'

Granted, that's a lot of speculation. And all of these trials may make you want to give thanks you're not a rodent living anywhere near a Japanese laboratory. But the dramatic results shown by the mice and guinea pigs tested certainly seem reason enough to investigate ABM further to determine if it's anywhere near as promising for us humans with cancer.

Extreme growing conditions make mushroom a rare commodity

Unfortunately, accessing supplies of ABM mushrooms or ABM supplements has been difficult. For decades, growers were unable to successfully cultivate this wild mushroom. It typically thrives in extreme conditions-intense Brazilian sunlight, humidity averaging 80 percent, and temperatures that soar to 100 degrees during the day and drop to 68 degrees overnight. It was only in the early '90s that growers devised a method of producing biologically active ABM mushrooms in beds of pasteurized horse manure and sugar cane residue (hardly appetizing, but reportedly it creates a powerful growing medium).

Today, Japanese consumers purchase 90 percent of Brazil's yearly ABM crop. Consequently, you're not likely to find fresh ABM mushrooms in even the best produce markets in America.

Could this Brazilian mushroom hold the secret to better chemo?

If ABM shows such promise on its own for fighting cancer, it seems logical to assume that it could enhance the effects of conventional cancer treatments. But when it comes to your health, assuming isn't nearly enough.

At Mie University in Japan, researchers conducted a series of tests with ABM and the cancer chemotherapy drug, 5-fluorouracil (5-FU). Administered alone (at a dosage of 10 mg/kg for 30 days), the ABM extract moderately inhibited tumor growth in cancerous mice. Treatment with both ABM and 5-FU strongly inhibited tumor growth in the mice.

The more interesting results, however, centered around ABM's effects on 5-FU. First, it prolonged the action of 5-FU, which, like many chemotherapy drugs, is only effective on its own for a short period of time. Second, it offset the drastic immune-system weakening usually caused by chemotherapy. At the end of the experiment, mice treated with the ABM/5-FU combination showed "significantly increased" numbers of immune-modulating cells compared to the mice treated with saline only.'

A few supplement companies, however, have begun producing ABM tablets (which are already hot sellers in Japan). No clinical trials have yet been published about these supplements. (All the published trials involve ABM extracts. The supplements typically contain whole mushrooms that have been freeze-dried and powdered.) So, the exact impact of ABM supplementation isn't known. But, again, our experience with other similar supplements makes us less skeptical.

If you try ABM, let us know about your experience with it. HSI will continue to search for information on this promising mushroom and for a source for the extract. Ordering information is in the Member Source Directory at the back of this report.

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Member Source Directory

ABM (Agaricus Blazei Murrill) Mushroom

VirtuVites
5092 Buttercup Drive
Castle Rock, CO 80104
tel: (800)332-5069 or (303)814-6980
fax: (303)814-0187 www.virtuvites.com

Guacatonga

Raintree Nutrition, Inc. 10609
Metric Blvd., Suite 101 Austin,
TX 78758
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fax: (512)833-5414
www.rain-tree.com

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fax: (561)686-1032
www.anpdirect.com

MCP (modified citrus pectin)

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SkinAnswer (glycoalkaloid cream)

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fax: (800)852-7153

(We regret that not all products and services are available in all locations worldwide.)

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These products are not intended to diagnose, treat, cure, or prevent any disease.