

**Dr. Eliaz**  
Your Guide to Wellness



# Pure Honokiol from Magnolia Bark

ONE EXTRACT, MANY BENEFITS

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## EXTENSIVE RANGE OF MECHANISMS AND BENEFITS

In published research, honokiol demonstrates an astonishing array of therapeutic actions:

- Anti-tumor
- Anti-metastasis
- Antioxidant
- Neuro-protective
- Selective pro-oxidant against cancer
- Anti-inflammatory
- Antimicrobial
- Glucose balance
- Cardiovascular support
- Cognitive support
- Immune support
- Anti-anxiety
- Antidepressant
- Other actions and benefits

## THE CUTTING EDGE OF CANCER CARE

Successful integrative cancer treatments are built on a dynamic, multidimensional strategy to increase overall health while fighting the disease. Honokiol is a lignan isolated from the bark, seed cones, and leaves of trees belonging to the genus Magnolia. Its ability to block the growth and spread of cancer on the cellular and genomic levels, combined with its powerful antioxidant and anti-inflammatory properties, make it a highly strategic component within integrative cancer treatments.

Equally important, honokiol shows the ability allow certain chemotherapy drugs to work more effectively, which we'll explore in this guide.

This can mean the difference between life and death for patients who have been failed by existing therapies. Honokiol is also shown to improve radiation treatment and help reduce painful side effects. Honokiol's powerful synergistic ability is a key reason why it plays such an important role within integrative cancer protocols.

In fact, honokiol offers both preventive and active therapeutic benefits. On the preventive side, honokiol helps reduce the cancer-promoting oxidation and inflammation caused by free radicals, toxins and heavy metals. Over-oxidation is particularly worrisome, as it can damage DNA, promoting abnormal cell growth and cancer development. Honokiol also boosts immunity and supports circulation, two key components of cancer prevention and control.

## CROSSING THE BLOOD-BRAIN BARRIER

The blood-brain barrier is critical to neural health and protection. It restricts the size of particles entering the brain, shielding us from bacterial infections and other conditions. Unfortunately, however, this barrier also keeps out beneficial therapies, such as chemotherapeutic agents, making it more difficult to treat brain cancer, or other neurological diseases.

Honokiol is a very small molecule, so it can easily enter the circulation and travel throughout the body to reach targeted areas quickly. The small molecular size also allows it to cross the blood-brain barrier, where honokiol has been proven helpful against brain cancer, Alzheimer's, and other neurological conditions.

One study published in *PLoS One* showed that honokiol crossed the blood-brain barrier and inhibited gliosarcoma (brain) tumors in animals. Gliosarcomas are among the most difficult cancers to treat.

## MULTIPLE ANTI-CANCER ACTIONS

On the cellular level, honokiol actively blocks many cancer mechanisms. Cancer is a disease of uncontrolled cellular growth, and rapid growth requires increased nutrition. One of cancer's survival tactics is to create new blood vessel supplies to the tumor, a process called angiogenesis. More blood vessels mean more food for the tumor, increased growth and a fast-track to metastasis.

## RESEARCHED IN MULTIPLE CANCERS

Extensive research has shown that honokiol:

- Boosts apoptosis in pancreatic cancer cells
- Inhibits prostate cancer cells
- Prevents breast cancer cells from growing and metastasizing
- Stops brain tumor growth
- Boosts apoptosis in oral cancer cells
- Induces rapid cancer cell death in metastatic bone cancer
- Inhibits non-small cell lung cancer cells
- Inhibits gastric cancer cells
- Inhibits adult T cell leukemia
- Inhibits colon cancer cells
- Inhibits malignant melanoma and prevents other skin cancers
- Works with other treatments to increase their anti-cancer activity
- Suppresses numerous pro-cancer genes and proteins
- Offers primary and secondary anti-cancer benefits

Honokiol works in part to halt angiogenesis, thus helping to prevent tumor growth and metastasis. For example, another study published in PLoS One showed honokiol's ability to block angiogenesis and proliferation of gastric cancer cells by regulating specific cell-signaling pathways.

Cancer is also a disease of failed quality control, so to speak. Normally, unhealthy, mutated or abnormal cells have quality control checkpoints that work to ensure the diseased cells self-destruct and die. This is an important regulatory process called apoptosis. However, cancer disables apoptosis, allowing tumor cells to grow and even survive chemotherapy, radiation and other treatments.

By disabling angiogenesis and boosting apoptosis in cancer cells throughout the body, honokiol provides a powerful one-two punch against tumor growth and metastasis. But it also shows the ability to kill cancer cells directly, unrelated to apoptosis and cellular checkpoint control.

For example, a study in the journal *Cancer* explored honokiol's ability to cause rapid cell death in metastatic bone cancer. Researchers observed that this specific anti-cancer mechanism did not involve apoptosis of cancer cells. Instead, higher concentrations of honokiol attacked and killed aggressive bone cancer cells directly. Such powerful, direct cytotoxic activity against cancer cells gives honokiol yet another targeted advantage in the fight against this deadly disease.

## **ATTACKING CANCER FROM ALL SIDES**

Cancer is smart, and it will attempt to survive at any cost. One metaphor is that of an under-filled water balloon: It's difficult to pop it with one hand, because no matter how hard you squeeze, parts of the balloon keep poking through your fingers. Even two hands may not cover all the escape routes. Similarly, a single cancer treatment may kill 98% of the disease; however, the remaining 2% may be enough for the tumor to return.

Because cancer is such a complex and rapidly changing disease, dynamic therapies must be combined to attack it from multiple angles. The goal is to stay ahead of the cancer in order to outsmart it and prevent it from evading treatment. Therefore, one approach, no matter how strong, is rarely enough.

Nevertheless, with such a wide range of targeted anti-cancer mechanisms, honokiol is one of the single most powerful natural cancer treatments. And as research continues, it's becoming known as one of the most important.

Honokiol excels as an anti-cancer strategy because of its extensive array of protective benefits and mechanisms. For example, cancer thrives on inflammation and oxidative stress, which help maintain the tumor microenvironment. Honokiol acts swiftly against both, while inhibiting angiogenesis, fighting cancer growth and reducing proliferation. It also provides a wealth of additional benefits that will be explored throughout this wellness guide.

Importantly, honokiol exerts its powerful effects safely without causing significant side effects—in fact it can help to reduce the severity of side effects triggered by conventional treatments.

## HELPS MALIGNANT CELLS SELF-DESTRUCT

Cellular signaling is a finely tuned system that ensures effective communication between cells and within cells. This is especially important for the cell cycle, the process through which cells grow and divide. For example, our DNA has 3 billion base pairs, each of which must be perfectly replicated when a cell divides. Errors can lead to mutations, and mutations can lead to cancer.

Cells do make mistakes, but sophisticated quality control systems inside the cell are supposed to catch and correct these problems. For example, cell cycle checkpoints stop DNA replication to ensure everything is going as planned. If not, and there's too much damage, the cell enters apoptosis, or programmed cell death. In other words, damaged cells are supposed to self-destruct. However, cancer cells find clever ways to disable this system and continue growing uncontrollably.

Honokiol actively influences cell communication, regulating DNA replication and stimulating apoptosis in cancerous and abnormal cells. Another study published in *PLoS One* found that honokiol halts the cell cycle and induces apoptosis in pancreatic cancer cells. The study also showed that honokiol enhances the apoptotic effects of the anti-cancer drug gemcitabine, demonstrating honokiol's powerful synergistic potential with other treatments.

In the treatment of leukemia, honokiol induced cell cycle arrest and apoptosis through the inhibition of specific cancer cell survival signals. These data were published in the journal *Biochimica et Biophysica Acta*.

A study in the *American Journal of Surgery* showed honokiol's ability to stop the proliferation and spread of malignant melanoma. Melanoma is one of the deadliest cancers because it grows and metastasizes so quickly. In this study, honokiol induced cancer cell death and blocked proliferation by regulating cell cycle arrest through multiple signaling pathways.

Another study in the *International Journal of Oral Science* found that honokiol induced apoptosis in oral squamous cell carcinoma.

In non-small cell lung cancer, which represents approximately 80% of lung cancer cases, honokiol suppressed cancer cell growth and induced apoptosis. Results of this study were published in the journal *Epigenetics*, again showing honokiol's anti-cancer effects via influence on multiple cell signaling pathways. In this study, cell cycle checkpoints were re-activated leading to apoptosis and inhibition of specific pro-tumor proteins.

By reactivating critical cell cycle quality control mechanisms, honokiol helps ensure that slightly damaged cells get fixed—and that thoroughly damaged cells, including malignant ones, die off.

## PROTECTS PRECIOUS GENOMES

When error correction circuits go awry, mutations can occur that lead to cancer. What's worse, once cancer is developed, quality control mechanisms continue to unravel, leading to further mutations that can make tumors more aggressive—and more treatment-resistant.

One quality control protein, called P53, suppresses tumors by preventing mutations. Cancer attacks this protein as part of its

survival strategy. However, a review in the journal *Antioxidants & Redox Signaling* gathered evidence showing that honokiol blocks signals in tumors with defective P53 proteins. In addition, the review confirms honokiol's ability to boost apoptosis in cancer cells.

## CONTROLS A WELL-KNOWN CANCER PROTEIN

Cancer often hijacks normal proteins to help it grow and survive. Like P53, NF- $\kappa$ B is important to the cell cycle, supporting normal growth; however, cancer mutates NF- $\kappa$ B so it never turns off. As a result, cells divide recklessly and resist apoptosis.

Excessive NF- $\kappa$ B activity can trigger cancer cell growth, invasion, proliferation and angiogenesis. Down-regulating the activity of NF- $\kappa$ B prevents cancer growth and metastasis, helps regulate the inflammation response and prevents cellular damage from oxidation. Honokiol suppresses overactive NF- $\kappa$ B, allowing the cell cycle to proceed normally.

Honokiol demonstrates remarkable synergy with numerous other ingredients, drugs, medicines and compounds, enhancing their beneficial effects. There are more than 800 therapeutic agents that inhibit NF- $\kappa$ B, including green tea and curcumin. Honokiol is shown to work with these agents, enhancing their impact for more powerful results. In the next section we'll take a closer look at how honokiol works to improve other cancer treatments and strategies.

## SYNERGY WITH CANCER TREATMENTS

One of honokiol's most impressive benefits is its ability to synergize with other cancer treatments. In other words, it can enhance the effectiveness of many different cancer fighting agents, both conventional and holistic. The whole becomes greater than the sum of its parts. Honokiol's unmatched synergistic effects deliver a critical advantage to any integrative anti-cancer program.

## OVERCOMES TREATMENT RESISTANCE

We recognize cancer by its rampant growth and spread throughout the body. But perhaps its most insidious trait is the ability to develop drug resistance. The initial optimism when a patient responds to treatment is often dampened when the cancer comes roaring back. If we are going to cure cancer, we must solve the resistance problem.

Because cancer cells mutate so readily, they find ways to resist chemotherapy, radiotherapy, hormonal and natural treatments. Quite often, treatments that once destroyed tumors become ineffective. Even one mutation in a small group of cancer cells can make a big difference. That's why integrative cancer treatments are designed to stay one step ahead of the disease, and honokiol is proving to be one of the most powerful weapons in this strategy.

A number of studies have confirmed that honokiol can decrease drug resistance in glioma, breast, prostate and other cancers. In fact, new investigations are helping us understand how honokiol defeats cancer resistance.

For example, research in the *International Journal of Oncology* and other publications shows that honokiol is adept at fighting

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treatment-resistant cancers by re-sensitizing cancer cells to chemotherapy and radiation treatments. As a result, a failed treatment is transformed into a successful one, providing new hope for many patients. Honokiol can even inhibit aggressive cancers that were previously considered untreatable. This is a key reason why this powerful agent is a foundational strategy in many of the protocols I design for my cancer patients.

One of the mechanisms cancer cells use to evade toxic treatments is to pump medicine out of the cell. Tiny protein pumps decrease cancer's sensitivity to treatments, allowing just enough cells to survive. These treatment-resistant cells grow rapidly to reconstitute a more aggressive tumor.

However, a recent study showed that honokiol can inhibit these pumps and restore cancer cell sensitivity to treatment. This is amazing news for cancer patients, many of whom will see their treatment options expand.

Further research highlights:

- A study published in the *International Journal of Oncology* showed that honokiol synergized with chemotherapy drugs in multidrug resistant breast cancer.
- A study published in *Molecular Cancer Therapeutics* showed that honokiol re-sensitized treatment-resistant colon cancer stem cells to radiation therapy.
- A study in *PLoS One* found that honokiol enhanced the apoptotic effects of the anti-cancer drug Gemcitabine against pancreatic cancer.
- Research published in *Oncology Letters* found that honokiol enhanced the action of cisplatin against colon cancer.
- A study from the *Journal of Biological Regulators Homeostatic Agents* showed that honokiol re-sensitized cancer cells to Doxorubicin in multidrug resistant uterine cancer.
- A study in *Toxicology Mechanics Methodology* showed that honokiol performed synergistically with the drug Imatinib against human leukemia cells.
- In addition to enhancing the therapeutic effects of chemotherapy and radiation, honokiol shows powerful synergistic effects when combined with natural medicines, such as modified citrus pectin (MCP). A combination of MCP and pure honokiol dramatically decreased the proliferation of prostate cancer cells. Another published study showed that the combination of MCP and honokiol produced greater anti-inflammatory and antioxidant activities compared to either product alone.

## INFLAMMATION AND OXIDATION

The body's ability to control oxidative stress and damage from free radicals is critical for long-term health. The damage caused by over-oxidation has been linked to cancer, heart disease, neurodegenerative diseases, diabetes and other conditions.

When not modulated in some way, oxygen can be a destroying force—for example, consider how it reacts with iron and produces rust. However, oxidation is also a crucial biological process. Our immune system uses oxidation to destroy invaders. On the other hand, too much oxidation from unstable free radicals and reactive oxygen species (ROS) leads to inflammation and

oxidative stress, interfering with normal processes and damaging proteins and DNA. While the body has a number of ways to reduce oxidation and fight free radicals, there are times when these processes just can't keep up.

Honokiol helps remove reactive oxygen from the body. In fact, as an antioxidant, this compound demonstrates 1,000 times more free radical scavenging activity than Vitamin E. Studies have shown that honokiol can help cells overcome oxidative stress, even extending into the nucleus to protect our DNA. Other research has found that honokiol's anti-oxidative effects help prevent oxidized cholesterol and plaque buildup in blood vessels, protecting us from cardiovascular disease and stroke.

## POWERFUL ANTI-INFLAMMATORY

Like oxidation, inflammation is a key part of the immune response. However, chronic inflammation can also lead to cancer, heart disease and other degenerative conditions. Obviously, fighting inflammation and reactive oxygen can have profound implications for good health. Luckily, honokiol targets both. For example, one study in the journal *Intensive Care Medicine* found that honokiol is effective against sepsis, a condition caused by the body's overreaction to injury or infection. In the study, honokiol reduced reactive oxygen, in the form of nitric oxide, and controlled a number of proteins associated with inflammation to treat life-threatening sepsis.

## NEURAL PROTECTION

Honokiol's powerful anti-inflammatory effects extend to the brain. Research published in the *Journal of Neuroinflammation* showed that honokiol fights inflammation in the brain by inhibiting overactive microglia. Microglia normally defend the brain against infection.

Addressing inflammation is particularly important when treating neurodegenerative conditions such as Alzheimer's disease or dementia. And because honokiol can cross the blood-brain barrier, it has been shown to be effective against these and other neurological conditions.

## COGNITIVE FUNCTION AND ALZHEIMER'S DISEASE

Alzheimer's disease deposits thick plaques of amyloid beta protein in the brain. While it's not entirely clear whether this is a cause or an effect of the disease, there's no doubt that these plaques pose a danger to brain health. One study, published in the journal *Neuroscience Letters*, found that honokiol's ability to modulate Gamma-Aminobutyric Acid (GABA) receptors—which we'll discuss more in the next section—also helps protect from amyloid beta protein.

In research published in the *American Journal of Chinese Medicine*, honokiol stimulated the neurotransmitter acetylcholine. This is particularly significant because Alzheimer's patients have lower acetylcholine levels.

Another important study published in the *Journal of Alzheimer's Disease* showed that honokiol prevented memory impairments,

oxidative stress and neuroinflammation in an animal model of vascular dementia. These findings add to the substantiation on this natural compound as a powerful agent effective against Alzheimer's disease.

## PARKINSON'S DISEASE AND STROKE

Honokiol is also shown to be effective against Parkinson's disease. One crucial study, published in *Biomedicine & Pharmacotherapy*, showed that treatment with honokiol for 1-2 weeks reversed motor impairment and progressive neurological damage, and extended lifespan, in an animal model of Parkinson's.

Research has also confirmed honokiol's neuro-protective effects against stroke. In one study in the *Journal of Natural Medicine*, researchers found that honokiol controlled the glucose intolerance associated with stroke. By reducing glucose intolerance in neurons, honokiol could potentially prevent cell death; however, honokiol seems to provide a more comprehensive protection from stroke damage. In a study in *Basic Clinical Pharmacology and Toxicology*, honokiol reduced stroke damage by reducing inflammation and oxidation. A review article in *BioFactors* highlighted the overall neuro-protective abilities of honokiol's anti-oxidative effects.

## HEALTHY MOOD SUPPORT

Because chronic inflammation in the brain is linked to anxiety and depression, it makes sense that honokiol would address these issues. But it does much more, serving as a gentle yet effective calming agent shown to treat anxiety, depression and occasional insomnia. It works by influencing the activity of certain neurotransmitters in the brain, mainly GABA, safely and without causing dependency or mental fog.

Historically, one of the most ancient uses of magnolia bark was to provide a natural, gentle relaxation effect. A variety of studies have indeed confirmed that honokiol is very useful against both anxiety and depression and does not create dependency or cause side effects.

As noted, honokiol modulates the neurotransmitter GABA, which helps control electrical activity in the brain and promote a natural relaxation effect. Interestingly, scientists are now finding that modulation of GABA pathways also relates in some ways to cancer prevention and treatment.

Other research has confirmed that honokiol is equally powerful against depression. The botanical reduced depression symptoms in animals and had a positive impact on neurochemistry.

There has long been an association between anxiety, depression and sleep disorders, so it's not a surprise that honokiol also benefits sleep. A study in the *British Journal of Pharmacology* found that small doses of honokiol extend non-rapid eye movement (NREM) sleep by activating neurons at the GABA receptor sites.

Honokiol's ability to influence GABA mechanisms for relaxation has been compared to the anti-anxiety actions of a specific

class of pharmaceutical drugs called benzodiazepines.

However, these pharmaceuticals (common ones being Valium and Xanax) come with a list of side effects and can be dangerously habit-forming. Honokiol on the other hand, exerts sedative actions that help to relax and calm, without causing dependency, brain fog or toxic effects, as prescription drugs often do. A study in the *Journal of Pharmacy and Pharmacology* showed that honokiol reduced anxiety comparable to Diazepam (Valium) but did not cause Diazepam-like side effects

Unfortunately, anxiety and depression are known to worsen other medical conditions, and vice versa— a real catch-22. For example, patients who face a cancer diagnosis must find ways to mitigate their stress or risk a worsened prognosis. Honokiol's ability to calm anxiety could help many patients overcome the stress associated with a serious illness, while its additional benefits help boost health in a number of other areas as well.

## CARDIOVASCULAR, METABOLIC, IMMUNE HEALTH AND MORE...

While showing powerful activity against cancer, inflammation and anxiety would be enough to earn any treatment high marks, honokiol has also proven to benefit a number of other conditions. Magnolia bark has a long history in Chinese medicine, dating back nearly 2,000 years to treat gastrointestinal distress, anxiety, respiratory illness and many other issues. On the other side of the East China Sea, honokiol has been used by traditional Japanese practitioners for its antithrombotic, antibacterial, antidepressant and other effects.

Today, modern research confirms what traditional practitioners have known for millennia—honokiol offers a wide range of therapeutic benefits beyond cancer alone. It fights cardiovascular disease, balances blood glucose and metabolism, combats infection and more.

## TREATS LUNG DISEASE

Honokiol has an affinity for the lungs, where concentrations are found to be higher than in other organs and tissues. With its powerful antimicrobial, anti-inflammatory and cell-regulatory actions, honokiol shows multiple benefits for respiratory issues and lung disease. One study, published in *Toxicology and Applied Pharmacology*, showed that honokiol treats pulmonary fibrosis—a potentially deadly condition of uncontrolled scar tissue buildup in the lungs that was previously believed to be untreatable. Results showed that honokiol inhibited key pathways that were involved in the transformation of healthy cells to fibrotic cells, and stopped the abnormal collagen deposition and inflammation associated with fibrosis.

Another study, published in *Pakistan Journal of Pharmaceutical Sciences*, demonstrated how honokiol inhibits airway inflammation in an animal model of asthma. These findings further support the use of honokiol in the treatment of lung and asthma-related conditions.

## FIGHTS CARDIOVASCULAR DISEASE

As noted, oxidative stress has been implicated in many diseases, including heart disease. Oxidation is partially responsible for the arterial plaque accumulation that blocks blood vessels, so we can see where honokiol's ability to control inflammation and oxidative stress can greatly benefit heart health.

In particular, oxidized LDL cholesterol, the "bad" cholesterol we are so concerned about, creates an inflammatory chain reaction that leads to plaque creation. A number of studies have demonstrated that honokiol controls LDL oxidation, mitigating these negative effects.

In addition, honokiol also exhibits characteristics found in pharmaceutical blood thinners. By controlling platelets, the blood components responsible for clotting, honokiol can help prevent the arterial blockages that lead to cardiovascular disease.

Hypertension, or high blood pressure, is also a risk factor for heart disease. Again, honokiol can help. A study published in the *Biological Pharmaceutical Bulletin* showed that honokiol can significantly reduce blood pressure.

## TREATS KIDNEY DISEASE

The buildup of fibrous tissue in kidney, or renal fibrosis, is a major component of kidney disease and can impair the ability of kidneys to function. This degenerative condition often leads to eventual kidney failure. Multiple studies, including data published in the *International Journal of Molecular Sciences*, showed that honokiol acts against specific proteins and signaling pathways involved in renal fibrosis.

## ANTI-MICROBIAL ACTIONS

The fight against pathogens, particularly bacteria and viruses, is ongoing. Because they mutate so rapidly, these invaders can be difficult to treat. Flu viruses change every season and bacteria develop resistance to frontline antibiotics. Eastern medicine has long recognized honokiol's ability to fight pathogens, and new research is substantiating this important application.

Viruses can be particularly troublesome. They inject genetic material into cells, hijacking the cellular replication processes in order to make more viruses. A study published in the journal *Liver International* showed that honokiol short-circuits this process, preventing the hepatitis C (Hep C) virus from infecting cells. By locking Hep C outside the cell, honokiol prevents it from completing its life cycle.

Honokiol has shown similar potent activity against bacterial infections, particularly against the bacteria associated with periodontal disease, such as *Porphyromonas gingivalis*, *Prevotella intermedia*, *Micrococcus luteus*, *Bacillus subtilis* and others.

Honokiol is also a powerful anti-fungal treatment. A study published in *PLoS One* showed the ability of honokiol to induce apoptosis in *Candida albicans* infection. These findings mirror previous research demonstrating the anti-fungal actions of pure honokiol against persistent fungal infections.

## STIMULATES GLUCOSE METABOLISM

Metabolic syndrome and its sinister offspring, type 2 diabetes, starts when cells have trouble taking in blood sugar, or glucose. When glucose rises, the pancreas pumps out more insulin to tell cells to take in more glucose. As the cycle proceeds, cells become more insulin-resistant, the pancreas works harder and harder, and too much glucose remains outside cells, damaging blood vessels and tissues throughout the body.

Research published in the journal *BioFactors* demonstrates that honokiol can break this cycle by helping cells to absorb more glucose. In addition, honokiol optimizes insulin signaling, the process where messages tell cells to take in sugar in the first place. This combined effect could be very helpful in treating both type 2 diabetes and metabolic syndrome.

## BENEFITS FOR GUT MICROBIOTA

Honokiol is also found to favorably modulate the composition of the gut microbiota. A study published in *Frontiers in Immunology* showed that honokiol reversed gut disorders and prevented diet-induced obesity in animals fed a high-fat diet. These benefits were shown to be attributed to the ability of honokiol to support the growth of healthy gut microbiota and help reduce unhealthy bacterial populations.

## BIOACTIVITY

One of the major concerns in medical care is targeting the right treatments to the right areas of the body. Sometimes a compound may have promising attributes in a test tube but, when it is used in a living organism, its molecules are too large to work as was hoped. This is critically important and one of the reasons honokiol is so effective against so many conditions.

Honokiol exhibits extreme bioactivity. In other words, its molecules are small enough to easily enter the blood stream and quickly reach targeted areas, such as tumors, arterial blockages, fibrous kidneys and even the brain. Honokiol travels throughout the circulation for maximum therapeutic benefit.

## THE FUTURE OF HONOKIOL

You may have known about honokiol before reading this guide. Or, this might have been the first time you ever heard of this fascinating nutraceutical. Either way, you will be hearing much more about this remarkable botanical therapy as research continues to uncover and substantiate its numerous critical benefits.

The wide range of published data cited here is only the tip of the iceberg. Hundreds of studies have shown honokiol's effectiveness against many conditions. More research is currently being conducted, and still more studies are being planned.

What's most important is how this knowledge is being translated into patient care. For the medical profession, a treatment that works against cancer, heart disease, mood disorders, inflammation and oxidation—without side effects—may have seemed too good to be true. But as published research and clinical reports continue to substantiate honokiol's beneficial effects, more practitioners are integrating this important botanical therapy into their clinical protocols. From medical professionals to savvy health-seekers, honokiol is steadily gaining a well-earned reputation, offering new hope and a powerful advantage in achieving optimal long-term wellness and vitality. Stay tuned for further advancements about this exciting, cutting edge of modern botanical medicine.

## HOW TO USE HONOKIOL

### HONOKIOL DOSAGES

<b>Active Cancer</b>	Build up to 1 gram, 3 times per day starting with 250 mg, 3 times per day. Can be increased as directed by healthcare provider
<b>Prevention and Post Therapy</b>	1 gram per day
<b>Anti-inflammatory and Circulation Support</b>	250 mg, 2 times per day to 500 mg, 2 times per day
<b>Periodontal Disease</b>	500 mg, 2 times per day until condition improves; then 250 mg, 2 times per day
<b>Antioxidant</b>	250 mg, 2 times per day
<b>Anxiety</b>	250 mg, 2 times per day
<b>Sleep</b>	250 mg before bed

Best taken with food. Increase dose gradually by one to two capsules per day.

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## ABOUT THE AUTHOR

ISAAC ELIAZ, MD, MS, LAc



Dr. Isaac Eliaz, a pioneer in the field of integrative medicine since the early 1980's, is a respected author, lecturer, researcher, product formulator and clinical practitioner.

Dr. Eliaz is a frequent guest lecturer on integrative medical approaches to health, immune enhancement, and cancer prevention and treatment. He has also taught several courses on Traditional Chinese Medicine for medical doctors and licensed acupuncturists. As an innovative formulator of dietary supplements, Dr. Eliaz developed and currently holds the patents for several of his unique herbal formulations. Many of these products are available through [ecoNugenics, Inc.](#) as well as from leading integrative medical professionals.

In order to substantiate nutritional approaches to health, Dr. Eliaz regularly participates in clinical studies and has been published in well-recognized, peer-reviewed journals. In addition, many of Dr. Eliaz' formulations have been submitted for validation in independent human clinical studies whose results have been published in peer-reviewed journals.

Dr. Eliaz continually studies, integrates and applies the best of health practices of both western medicine and complementary and alternative approaches. A native of Israel, Dr. Eliaz lived in the Far East and in Latin America before returning to study medicine at Tel Aviv University. While studying for his degree, Dr. Eliaz' interest turned towards the role of alternative therapies in daily health. This led to his eventual research and personal experience with yoga, shiatsu, and acupuncture as therapeutic modalities.

After graduating medical school in 1986, Dr. Eliaz established a highly successful clinical practice in Tel Aviv, utilizing his training in both western and eastern medicine. While maintaining a clinical practice, Dr. Eliaz pursued graduate studies in clinical herbology at Hebrew University of Jerusalem and classical Chinese medicine with teachers in Israel and Europe.

In 1989 Dr. Eliaz moved to the San Francisco Bay area in order to continue his studies at the American College of Traditional Chinese Medicine, earning a Master of Science degree in 1991. During this time he also energetically sought-out leading practitioners of alternative medicine to broaden his knowledge and experience. Since 1991 Dr. Eliaz has maintained a busy private practice in northern California that focuses primarily on integrative, holistic protocols for cancer patients.

The guiding mission of Dr. Eliaz' professional life is achieving the integration and synergy of multiple healing modalities from both ancient and modern paradigms into a holistic practice of medicine. It is the heart of his clinical practice, of his research, and a mission that he communicates with great passion and clarity.

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