

# Mangosteen Research Introduction



**The Mangosteen, if scientific research is any indication, is perhaps the most important fruit on earth.**

The potent effects on human health of the Mangosteen have been observed for centuries in Southeast Asia.

A powerful anti-inflammatory and anti-oxidant, Mangosteen has a wide range of health benefits, well **documented in reliable sources.**

Beneficial properties of Mangosteen and Xanthones have been **studied worldwide for over 40 years**, and **scientifically documented in over 1500 publicly accessible research papers**. Summaries can be searched at the U.S. National Library of Medicine.

**U.S. National Library of Medicine** <http://www.pubmed.gov> - search "xanthones"

"What is impressive about these studies is that all the scientific studies on Mangosteen are independent, *the studies have no commercial bias...* no safety or toxicity issues have been noted... I am now convinced that mangosteen will, without a doubt, be the most medically successful food supplement ever."

~ J. Frederic Templeman, M.D.

Dr. Templeman is a practicing primary care physician, board-certified in both the US and Canada. He has never before endorsed a food supplement.

Dr. Templeman is one of over 2000 doctors now using and advocating mangosteen.

**U.S. National Genetic Resources Program (NGRP)** "It is the NGRP's responsibility to: acquire, characterize, preserve, document, and distribute to scientists, germplasm of all lifeforms important for food and agricultural production."

Mangosteen is listed with over **200 separate benefits** in Dr. James Duke's Phytochemical and Ethnobotanical Database. [http://sun.ars-grin.gov:8080/npgspub/xsql/duke/pl\\_act.xsql?taxon=1228](http://sun.ars-grin.gov:8080/npgspub/xsql/duke/pl_act.xsql?taxon=1228)

Dr. James Duke is perhaps Americas foremost ethnobotanist. He worked for the USDA and University of Maryland, is a prolific writer, and created the phytochemical and ethnobotanical database at the US government's National Genetic Resources Program.

**Disclaimer: No medical claim is made about any particular product. Dietary supplements are not a substitute for treatment by your licensed medical professional.** All the research cited here was conducted in the laboratory, or with animals. As with most whole foods and time-tested natural remedies, there have not yet been the very expensive double-blind studies with humans that are required of pharmaceuticals, which can have dangerous side effects. There are no historical records of any folk medicine warnings or safety concerns after centuries of medicinal use of the plant in Southeast Asia. One thing that distinguishes the Mangosteen from other valuable botanicals is the large number of lab studies.

## Mangosteen -- What is it?

The Mangosteen is tangerine-sized and is deep purple in color on the outside, with a bright white pulp in the inside. Prized because of its excellent flavor, in Asia it is called the "Queen of Fruits," and, in the French Caribbean, the "Food of the Gods." The Mangosteen tree is found predominantly in Southeast Asia in countries like Cambodia, China, Indonesia, Malaysia, Singapore, Taiwan and Thailand, where it grows in great abundance, much like orange trees do in Florida.



**Used for centuries throughout the lands in which it grows**, recent scientific studies have revealed an incredible scope of potent human health benefits leading many to believe that Mangosteen will be the most important fruit on earth.

According to the research, the most concentrated source of xanthenes found in nature is in the Pericarp (rind) of the mangosteen fruit. The majority of clinical studies on xanthenes specify that the xanthenes used were from the mangosteen Pericarp.

The people of Southeast Asia are very familiar with the prized mangosteen fruit and Asian Health Practitioners have long made use of Pericarp for a myriad of nutritional uses. The mangosteen fruit, however, has never been introduced to the Western world and much of the science behind xanthenes is predominantly available to those in the medical community until recently. Many of the clinical studies on xanthenes have been done in universities and testing facilities throughout Asia and have recently started to catch the attention of Western researchers.

Science has shown that each xanthone has a unique function in relation to how they work in the body. For example, a xanthone, garcinone E has been scientifically proven to be more efficient in killing cancer cells than the top 4 most potent chemotherapy drugs. The **Sloan-Kettering Cancer Center** in New York recently published an article that cites these findings:

*"Recent studies have revealed that xanthenes from the fruit hulls exhibit antibacterial, antifungal, and anti-inflammatory properties. Alpha-mangostin, a xanthone, inhibited growth of human leukemia HL60 cells, reduced the synthesis of prostaglandins, and prevented oxidative damage of LDL in vitro. There is also preliminary evidence that alpha- and gamma-mangostins act as histamine and serotonin receptor blockers, and also inhibit HIV-1 protease. Garcinone E, another xanthone, exerts cytotoxic effects against human hepatocellular carcinoma cells. Extract from the pericarp of mangosteen has antiproliferative, antioxidative, and apoptotic effects against human breast cancer SKBR3 cells. No adverse effects have been reported with the use of mangosteen."*

## Summary of the documented benefits of the Mangosteen

### Findings from Independent Scientific Studies on Health Benefits of Mangosteen

**Systemic Effects:** Helps with fatigue, low energy. Used by persons with chronic fatigue and illness.

**Immune System / Antibiotic:** Anti-bacterial, anti-viral, anti-fungal. Protects against pathogens, sepsis, influenza, pneumonia, tuberculosis, AIDS, and diverticulosis. Laboratory demonstrated to interfere with HIV protease, which keeps the virus immature and incapable of infections. Thai study demonstrated effectiveness against staphylococcus aureus bacteria. Polysaccharides in the rind stimulate phagocytic immune cells (PMNs and monocytes). Effective against salmonella, typhus and tuberculosis bacteria.

Asian healers have used Mangosteen for centuries for syphilis, malaria, and amebic dysentery. In South America, it is used for intestinal worm infestations.

**Anti-Tumor Properties:** Xanthenes and Catechins in Mangosteen: Prevent formation of carcinogenic compounds by blocking co-carcinogens. Turn up body's natural detoxification defenses. Suppress cancer promotion or growth. Documented in many laboratory studies to kill or inhibit cancer cell lines including breast, liver, lung, leukemia, and gastric cancers. In a 2002 study done in Japan the Xanthone, Garcinone E, was tested against six current chemotherapy agents (5-Fluorouracil, cisplatin, vincristine, methotrexate, mitoxantrone and Taxol) to compare its ability to kill cancer cells in laboratory preparations. The cell lines came from lung, stomach and primary liver cancer. Garcinone E was found to outperform all the drugs tested except Taxol, which it matched, with no side effects. (Garcinone E is one of 46 Xanthenes found in the Mangosteen fruit)

**Heart Health / Atherosclerosis:** In a 2003 study in China "The researchers found that xanthone preserved endothelial cells inhibited the increased adhesion of monocytes to endothelial cells induced by oxidized LDL. This is especially important in **preventing plaque formation and the subsequent blockage of arteries and heart disease.**" In another study "The oxidation of low density lipoprotein (LDL) may play an important role in atherosclerosis. The researchers investigated the possible antioxidant effects of mangostin, isolated from *Garcinia mangostana* (mangosteen), on the oxidation of human LDL (bad cholesterol)." From these results, they concluded that mangostin is acting as a free radical scavenger ("mop up" sponge) to protect the LDL from oxidative damage in this in vitro system. In other words, it helps keep arteries clear.

**Gastro-Intestinal System:** Dysentery, GI pathogens, diverticulosis, histamine and serotonin blocking capacity. Reduces excess stomach acid (GERD). Anti-allergic effect. Anti-stomach ulcer.

**Skin:** Mangosteen used for centuries to treat eczema, dermatitis, wounds, ringworm, acne, impetigo, and growth disorders of dermis (psoriasis or seborrhea) skin cancer and sun damage.

**Respiratory System / Allergies / Asthma:** A Mangosteen study in September 2002 reported that it is an anti-histamine, anti-inflammatory and anti-allergenic agent. Relevant for asthma. Xanthones modulate IGE, antibody class involved in allergic reactions. Mangosteen can accomplish what we now use several drugs to do. Ideal product to use daily to protect our respiratory systems integrity.

**Arthritis / Joint Issues:** Mangosteen has been shown to be a potent anti-inflammatory.

**The Central Nervous System:** Scientists from Japan, under the leadership of Dr. Nakatani, published several articles on the anti-inflammatory and antihistamine effects of the mangosteen. The most impressive of these articles appeared in the journal "Biochemical Pharmacology." In it, the scientists described how mangosteen prevented inflammation in laboratory brain cell preparations. It is important to note that brain inflammation is one of the basic disease processes in multiple sclerosis, Parkinson's disease and all brain infections. Dr. Nakatani suggested that Gamma-mangostin, a xanthone, should be investigated as a therapeutic agent for use in the treatment of Parkinson's disease and Multiple Sclerosis patients.

**Diabetes:** A study from 2001 found that mangiferin, a xanthone from Mangosteen, lowered the blood glucose (sugar) level in type II diabetic mice. They went on to say "from these findings, it seems likely that mangiferin exerts its antidiabetic activity by decreasing insulin resistance."

**Mood / Depression / Anxiety:** A 1994 study found "Of several compounds studied, xanthone emerged as a potent monoamine oxidase inhibitor (MAOI)." MAO inhibitors are used as anti-depressant and anti-anxiety medications. Other properties in the Mangosteen support this use.

**Blood Pressure Lowering:** Several studies have shown Mangosteen as a vasorelaxant, and "exhibiting effective hypotensive (lower blood pressure) activity" in rats.

**Glaucoma:** Mangosteen has been used to provide prevention and relief with glaucoma, cataracts, and other eye health benefits.

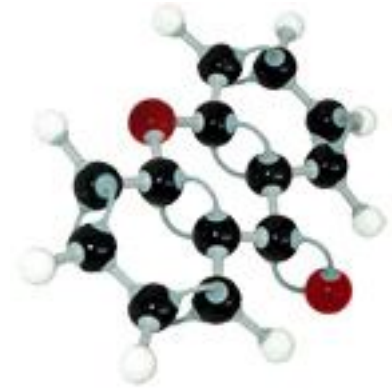
**Pain:** Mangosteen is listed as an analgesic, and can be a potent pain reliever.

# Why is it good for so many things?

## Free Radicals, Antioxidants & Xanthenes

These days, everybody knows about free radicals and antioxidants.

**Free radicals attack the cells in our bodies every second of every day, and antioxidants work to repair the damage.**



Much has been made of the extensive antioxidant properties of vitamins, especially Vitamin C and Vitamin E... But did you know that there exists an antioxidant that is **much more powerful than any vitamin?**

This powerful, life-enhancing substance is called **Xanthone**. In fact, there is a whole family of Xanthenes, which have many established health benefits. At least 46 are found in the amazing **whole fruit Mangosteen**. While most people know about the antioxidant benefits of Vitamins C and E, far fewer are aware of the **incredibly potent antioxidant power of Xanthenes**.

According to **professional journals** such as **Free Radical Research, Journal of Pharmacology,** and the **Indian Journal of Experimental Biology**, these Xanthenes have a remarkable effect on cardiovascular health; are naturally antibiotic, antiviral, and anti-inflammatory; and are **some of the most powerful antioxidants to be found in nature**.

## Mangosteen: A Powerful Natural Anti-Inflammatory

Definitely one of the most powerful natural antioxidants ever discovered, the Mangosteen also contains other benefits that are *even more* exciting in some ways. Its **anti-inflammatory xanthenes** may be responsible for providing more immediate relief than any other phytonutrients found in the fruit. Mangosteen Juice is a "**COX 2 inhibitor**", just like the pharmaceutical drugs Vioxx, Celebrex, Bextra, etc. but with **no side effects and many side benefits**.

Inflammation plays a huge role in an incredible array of common ailments:

- Arthritis
- Back pain
- Heart attack
- Headache
- Multiple Sclerosis
- Circulatory Impairment
- any kind of infection
- Stroke
- Allergies
- Alzheimers
- Crohn's
- Ulcers
- Excema
- and many more

While inflammation can affect all tissues in the body, it is the primary mechanism underpinning diseases which attack muscles, joints and connective tissue.



As discussed in this recent Time Magazine cover story, current research shows chronic inflammation to be linked with most major diseases, including Heart disease, Cancer, Stroke, Diabetes, and neurological diseases such as Alzheimer's.

"Suddenly, inflammation has become one of the hottest areas of medical research. Hardly a week goes by without the publication of yet another study uncovering a new way that chronic inflammation does harm to the body. "

**And Inflammation is the primary cause of pain.**

[www.mangosteenlinks.com/docs/Time\\_Article\\_Secret\\_Killer.pdf](http://www.mangosteenlinks.com/docs/Time_Article_Secret_Killer.pdf)

Dr. Kenneth J. Finsand has this to say:

"This is probably the most famous use of all the qualities found in the mangosteen: **it is by far the most powerful anti-inflammatory I have ever seen in 30 years of practice.** Research has proven this to be true, along with folk medicine history."

Dr. Frederic Templeman tells us that the anti-inflammatory properties of mangosteen have been compared in strength to one of the most potent anti-inflammatory prescription drugs, **Dexamethasone**. In his words, "**this drug knocks the socks off Vioxx in terms of potency.**"

[**NOTE:** Since the above statement about **Vioxx**, that drug was **pulled from the market** as of September 30, 2004. **According to the Wall Street Journal, Vioxx may have led to more than 27,000 heart attacks and sudden cardiac deaths** before it was pulled from market. [www.mangosteenlinks.com/docs/Vioxx\\_report.pdf](http://www.mangosteenlinks.com/docs/Vioxx_report.pdf) ]

Just look at this list of possible adverse side effects from the above mentioned drug Dexamethasone; a pharmaceutical anti-inflammatory with a potency about 40 times that of hydrocortisone, which also acts as a powerful immuno-suppressant:

- upset stomach
- stomach irritation
- vomiting
- headache
- dizziness
- insomnia
- depression
- anxiety
- acne
- increased hair growth
- easy bruising
- irregular or absent menstrual periods



**Mangosteen has NONE of the above side effects**

## How safe is Mangosteen?

Toxicity studies were done in the laboratory with rats, using the human equivalent of 3 liters of mangosteen juice per day, with ***no adverse behavioral or tissue effects noted.***

Also, there are no historical records of any folk medicine warnings after centuries of medicinal use of the plant in Southeast Asia.



It is always recommended that you **consult your physician**, if you have a known medical condition or allergy before using any food supplement. Mangosteen is safe for use by children and adults under almost any condition.

## What are the qualities of an ideal health supplement?

- Effective, *it works!*
- Safe, **no adverse side effects**
- **No** contraindications with medications
- Prevention
- Has broad applications

Take a close look and you will find that the mangosteen measures up in ALL categories.

To try it for yourself contact the person who gave you this.

For more information visit [www.mangosteenslinks.com](http://www.mangosteenslinks.com)



**Watch Jon's Story** - a touching real life video testimonial about a boy who recovered from a life threatening disease. (10 min)

[www.mangosteensinfocenter.com](http://www.mangosteensinfocenter.com)