*Artemisinin, The Great Eastern Secret*

In the 1960s, the Chinese army funded a study to find the most effective treatment for malaria. They researched thousands of substances for well over a decade. In the mid 70s, a clear winner emerged. An extract of the plant *Artemisia annua* was found to be the only substance tested that was actually effective, and it also improved symptoms and cured the disease faster than any drug in history.

When the results of the study were published in 1979, harsh skepticism was the response. It was thought that a molecule with such poor chemical stability would never be able to serve as an effective malaria medication. For the next 20 years, artemisinin, as it was called in the West, remained a closely guarded Chinese treasure. Even though the plant species is relatively common throughout the world, only the Chinese were using it as a standard malaria medication. It wasn't until the mid 2000s that artemisinin became the treatment of choice for malaria globally.

While this may appear to have been a thirty-year process, the use of artemisinin as a treatment for malaria actually dates back almost 2000 years to ancient Chinese medical texts. Its use in general medicine is even older. In 168 B.C., artemisinin is listed in a medical document found in the tomb of the Mawangdui Han Dynasty where it is recommended for curing hemorrhoids.

One of the greatest concerns about artemisinin is that the story of Chloroquine will be repeated and that the malarial parasites will develop resistance to the medications. The World Health Organization, therefore, recommends the use of an additional medication, and as a result a number of medications have been developed called ACTs or Artemisinin Combination Therapies.

Most of the Chinese research, however, indicates that supplemental or combined medications may not be medically necessary to cure malaria. Even in the original studies done in the early 70s on over 2,000 patients, artemisinin was effective on all of them. There were a number of cases in which the malaria reoccurred, but these cases were remedied with another round of artemisinin. This may indicate that one should continue treatment with artemisinin even after symptoms are gone in order to eradicate any remaining or incubating malarial parasites.

Because artemisinin has been available in China for so many years, many Chinese practitioners have found it beneficial for a number of other medical conditions, though not as glamorous as malaria and cancer.

International sources of research suggest that artemisinin may be effective for:

- Intestinal parasites
- Blood borne parasites
- Gastrointestinal bacterial overgrowth
- PMS
- Menstrual irregularities
- Malaria
- Broad spectrum of cancers
- Breaking down necrotic tissue, wound healing

For example, the Hoang family of medical practitioners has used artemisinin successfully to breakdown and remove necrotic tissues from the

body. This is extremely beneficial for people who have internal wounds caused by conditions like Crohn's disease and ulcerative colitis.

The Hoang family also recommends the herb for a number of female hormonal health issues like " …PMS, cramping, excessive bleeding, and all symptoms of hyper-estrogenemia and hyperprolactinemia.".

Though the Hoang's have had success in these areas, broad-spectrum research has not yet been conducted to verify its effectiveness.

In America, there has been considerable research done on the anti-parasitic properties of artemisinin. Specifically, the works of Dr. Herman Bueno and Dr. Leo Galland have used artemisinin orally to treat intestinal parasites, Clostridial overgrowth and other harmful bacteria along the digestive tract.

There is still some controversy surrounding artemisinin, but it is not about whether or not it is effective, but rather how exactly it functions in the human body, and specifically how it targets malarial parasites. The currently favored theory is that the artemisinin molecule has an affinity for iron and ferrous compounds. When artemisinin encounters these compounds, it turns into a toxin that damages and kills the parasite. This would explain why artemisinin is able to target the parasites, but not harm healthy cells and exhibit little to no side effects.

There is also strong evidence to support this theory and it comes from another branch of medicine that is deeply interested in artemisinin and that is the field of cancer research. Two characteristics that are unique to many cancerous cells are that a) they are rich in ferrous compounds, and b) they are typically depleted of antioxidants. Why the second fact is important is because when artemisinin reacts with the iron, it forms a toxic and damaging oxidants. If there were sufficient antioxidants within the cancer cell, these would become chemically neutralized and pose no threat, but because the cancer cells are often severely depleted of such nutrients, they are uniquely susceptible to oxidant damage.

While the mechanisms of action may be somewhat theoretical, the fact is that the actual research being performed on cancer with artemisinin and its various derivatives is showing strong promise. In December of 2002, in an article published by Dr. Robert Jay Rowen in the Townsend Letter, he outlined a number of successes he had with cancer patients on artemisinin supplementation as the major component in his cancer protocols.

One of the most intriguing cases was a woman in her 40s who had breast cancer that had metastasized into various locations on her spine, which was extremely painful. She had received radiation therapy on her spine, and then began artemisinin supplementation orally, as well as a modified diet. After 4 months of artemisinin, a PET scan showed no cancer activity in her entire spine, even in places that had not been radiated. Furthermore, the PET scan did not show cancer activity *anywhere else.*

While this may seem incredible and anecdotal, the fact is that this is just one of several examples, and artemisinin has actually been used as part of cancer protocols in Vietnam and China for 30

years, and it is only in recent years that Western medicinal research has begun to pay serious attention to the powerful chemotherapeutic potential of artemisinin.

For example, in 2001, Efferth, et al., published a study that concluded that the artemisinin derivative artesunate was effective against a wide variety of cancers. The study analyzed artesunate's (ART) effectiveness against 55 forms of cancer, including drug resistant cell lines. The fact that none of the drug resistant cell lines showed resistance to ART is truly incredible. The cell line with the highest sensitivity to ART was leukemia, followed closely by colon cancers. It was concluded that ART had intermediate effectiveness against cancers of the breast, ovaries, prostate, kidneys, skin, and central nervous system. The cancer with the lowest sensitivity was non-small cell lung cancer.

Though artemisinin is nothing new to the medical practitioners of the East, it is becoming more and more apparent to the alternative medical field of the West that artemisinin has great latent medical benefits that could be of tremendous value to the health and well being of the entire world. The sooner we can document and verify these properties, the better it will be for us all.

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