

Gianfranco Baronzio¹, L. S., Elisabetta Crespi¹, Adeline Guais, Edward Sanders, and N. D. a. G. Fiorentini (2012). “Early clinical and toxicological results of a combination of natural glycolysis inhibitors (METABLOC™) on cancer patients.” Biomedical Research 23.

...targeting aerobic glycolysis has clearly been recognized as a potentially fruitful approach for the treatment of cancer. The inhibition of aerobic glycolysis by a combination of alpha lipoic acid and hydroxycitrate (METABLOC) is efficient to inhibit tumor development in several mouse models. In association with chemotherapy, it seems to improve survival of patients with tumors difficult to treat when compared to a single chemotherapy regimen....Eleven patients with advanced metastatic cancer from were treated with per os 0.4 to 1.8 g of lipoic acid and 1.2 to 3 g of hydroxycitrate during 2 to 21 months in addition to their normal chemotherapeutic regimen. Side effects occurred in half of the patients but were mild (grade 1-3) and limited to gastrointestinal disorders that disappeared on using proton pump inhibitors or decreasing the doses. Five patients were characterized by a partial regression, 3 by a stable disease, and 3 by disease progression. In conclusion the results from these preliminary treatments support that METABLOC can be used safely with various common standard chemotherapeutic regimens. It also suggests that its use may slow down tumor growth, an observation that needs to be confirmed by a randomized controlled trial.

Abolhassani, M., A. Guais, et al. (2012). “Screening of well-established drugs targeting cancer metabolism: reproducibility of the efficacy of a highly effective drug combination in mice.” Invest New Drugs 30(4): 1331-1342.

Alterations in metabolic pathways are known to characterize cancer. In order to suppress cancer growth, however, multiple proteins involved in these pathways have



MetaBlockPlus

SUPPLEMENT COMBINATION GOALS- Separate Supplements are used to reach the desired amounts and ratios

Hydroxycitric Acid	3000 mg
Alpha Lipoic Acid	1800 mg
Capsicum	1500 mg

Key Features

**Developed by
researchers in France and Italy,
this combination of natural substances
is designed to target and inhibit
specific metabolic pathways
used by cancer cells to grow.**

*These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.

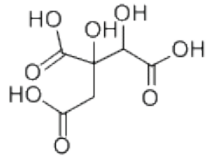


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Hydroxycitric Acid

Hydroxycitrate is derived from the tropical fruit *Garcinia Cambogia*.

Also known as HCA, it is a natural compound that is a known inhibitor of ATP citrate lyase, an enzyme which is overexpressed in cancer cells.

Alpha Lipoic Acid

Also called thioctic acid, it is made naturally in the body and may protect against cell damage in a variety of conditions. Alpha lipoic acid, known as the “universal oxidant,” has been used for decades in Europe, especially Germany, to treat nerve conditions, including nerve damage resulting from poorly controlled diabetes. (NATURAL STANDARD)



ALA is a cofactor of the enzyme pyruvate dehydrogenase (PDH), which is down-regulated in cancer cells.

Capsaicin

Derived from the cayenne pepper plant, capsicum has been used for generations for it’s warming and stimulating nature.



A new component to the original formula, the addition of capsaicin further delays tumor growth in mice in a dose dependant manner.

Research Summary & Selected Citations

The underlying theory for this combination goes back to the seminal work of nobelprize winner (physiology) Otto Warburg, who showed that cancers cells use altered metabolism for growth compared to normal cells. Researchers used knowledge of the metabolic dsyregulation of tumor cells to chose substances that would inhibit specific pathways advantageous to cancer cells, and promote normal cell development.

The first study on a combination of hydroxycitrate and alpha lipoic acid as a treatment for tumors was published in 2010. Studies in cell cultures, animal models and early human trials have shown tumor regression and improved survival, equal to that of chemotherapy. Using the formula along with chemotherapy provided an enhanced, synergistic effect in some cases.

Guais, A., G. Baronzio, et al. (2012). “Adding a combination of hydroxycitrate and lipoic acid (METABLOC) to chemotherapy improves effectiveness against tumor development: experimental results and case report.” *Invest New Drugs* 30(1): 200-211.

...This treatment was as efficient as chemotherapy in the three mouse cancer models that were tested...administered to mice implanted with syngeneic cancer cells, LL/2 lung carcinoma and MBT-2 bladder carcinoma, concomitantly with classical chemotherapy (cisplatin or methotrexate)...the triple combination ..is more efficient than cisplatin or methotrexate used individually. Of particular note are the results obtained in the treatment of an 80 year-old female who presented with ductal adenocarcinoma of the pancreas accompanied by liver metastases. A treatment course using gemcitabine plus alpha-lipoic acid and hydroxycitrate gave highly promising results.

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