

# “Energy to Get the Job Done: Lipoic Acid Mineral Complex”

## THE NEW APPROACH IN INTEGRATIVE MEDICINE

By Frank Antonawich, Ph.D.

Years ago, scientific and medical therapeutic approaches focused on cellular metabolism. With the advent of genetics, a concentrated shift toward genomics occurred. The area of metabolism is key, and is now being revisited and showing promise and hope for our health.

One approach is the support/increase of cellular energy - **this is metabolic power**. As we age, there is a decrease and breakdown in metabolism; furthermore, numerous disease states involve metabolic dysfunction (i.e. degenerative conditions, ischemia/stroke, and cancer). The power plant of the cell is the mitochondria. It utilizes high energy chemistry to donate electrons and drive the production of ATP, our energy source and the key to proper cell function.

LIPOIC ACID MINERAL COMPLEX (LAMC) is composed of a rare mineral bound to the antioxidant lipoic acid in a trimer around thiamine (B1). LAMC complex is available in a supplement form that contains a unique combination of minerals, vitamins and amino acids. This liquid crystal polymer provides a unified redox/complete molecule that more efficiently accepts energy; this serves as potent oxidative stress cellular protector. Furthermore, it can also donate energy and serve as an alternative energy source for the cell. This electron transfer has shown to be the key to its physiological effectiveness.

LAMC was discovered in 1989 by Dr. Merrill Garnett. His inquiry and screening into organo-mineral compounds led to this discovery. The principles that led to these findings showed that certain electrical signals are at the heart of all physiological processes.

- The supplement is not merely a cocktail of ingredients; rather, it is a complex/polymer that is both fat and water soluble so it travels to all parts of the body and crosses the blood brain barrier.
- LAMC has undergone extensive pharmacology and kinetics testing both intravenously and orally with a safety record of over 20 years.
- Research with LAMC continues to show its effectiveness in many different patients and conditions.
- The LAMC complex is a liquid crystal polymer. Any redox molecule can absorb electrons/energy, but **the LAMC also donates them for mitochondrial up-regulation and increases oxygen**. The electrochemistry work demonstrates LAMC’s significant redox potential versus a monomolecular one. An ORAC assay was conducted by Brunswick Labs, Inc. that measures the oxygen or free radical absorbance capacity of a compound, compared to Trolox per gram of vitamin E.

Vitamin A = 1.6 (2,800)	Melatonin = 2.04 (3,468)
Vitamin C = 1.12 (1,890)	Lipoic Acid = 1.4 (2,400)
Vitamin E = 1.0 (1,700)	<b>LAMC Supplement = 5.65 (9,605)</b>

While the LAMC supplement is a highly effective free radical scavenger, its ability to donate electrons to the mitochondria of the cell is critical key to its multiple benefits. Clinical and animal research supports the science regarding its benefits in cancer, stroke, ischemia and multiple degenerative diseases. Following an interruption of blood flow or breakdown too many tissues, there is deprivation of oxygen and glucose. Providing an alternative energy source can maintain the integrity of the electron transport chain within the mitochondria. The LAMC complex demonstrated its ability to shuttle electrons to oxidized DNA and protect it while also going to the mitochondria for support. This is critical since mitochondrial health is a major concern during myocardial and cerebral ischemia. By providing this alternative energy source, the energy transport chain components do not readily dissociate. In a normal cell this would obviously provide a boost, but would serve as a supplement to an abnormal, ischemic or dysfunctional cell thereby stabilizing their function so that they can perform their necessary functions in the body.