

PRESS RELEASE

May 17, 2011 SBI ALApromo Co., Ltd.

<u>Meeting of the Japanese Society of Nutrition and Food Science</u> Discovery of ALA has the effect of improving metabolism and suppression of the accumulation of fat

SBI ALApromo Co., Ltd., (head office: Minato-ku, Tokyo; Representative Director and CEO: Yoshitaka Kitao; "SBI ALApromo"), a subsidiary of SBI Holdings, Inc., that conducts research and development of cosmetics, health foods and pharmaceuticals using 5-aminolevulinic acid (ALA¹⁾) has discovered that ALA has the effect of increasing energy metabolization²⁾ and the effect of limiting the accumulation of fat in collaboration with Kyoto Prefectural University, Cosmo Oil Co., Ltd. and Biomaterial in Tokyo Co., Ltd.

The research results were announced at the 65th annual meeting of the Japanese Society of Nutrition and Food Science held on May 13 to 15.

The research revealed that rats eating feed containing ALA for 14 days showed significant limitation on the amount of fat accumulated in organs with increased metabolism, increased oxygen consumption and higher body temperature. ALA is already well known to up regulate the activity of mitochondria (Complex IV³⁾), but this research also indicated an increase in uncoupling proteins (UCPs⁴⁾) in fat cells. ALA is counted on the effect of promoting health from the result that increased metabolism and heightened body temperature confirmed through respiratory gas analysis in volunteer trials of health foods containing ALA.

Recently, the body temperature decrease and lowered immunity are one of the problems for people of today. Up regulating metabolism and increasing uncoupling proteins by ALA, it is expected to increase body temperature and improve immunity. Furthermore, rat administered ALA was found to limit the accumulation of fat. These results indicate ALA is counted on not only a dieting effect but also the effect of promoting health.

We will continue with further efforts in research on the efficacy of ALA to contribute to the promotion of good health.



Explanation of Terminology

- An amino acid created in mitochondria. It is an important substance that serves as protein material related to energy production in the form of hemes and cytochromes, and its productivity is known to decrease with age. ALA is contained in shochu distillation remnants, red wine and food such as radish sprouts. In addition, it is known as a material forming chloroplasts in plants, and fertilizers and health foods containing ALA are among its practical applications.
- 2) This is an indicator of biological activity. If energy metabolism decreases, body temperature is lowered along with immunity, while making a person more susceptible to gaining weight.
- 3) One of the five protein complexes that work in the electron transport chain used for the creation of energy (ATP) in mitochondria, and an extremely important complex in the consumption of almost all oxygen consumed in the body.
- 4) A protein that creates heat within fat cells and muscle. As this protein increases, the amount of energy used as heat increases, heightening the consumption of sugar and fat.

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