Use of Lipoxygenase Inhibitors to Control Body Fat

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The Wisconsin Alumni Research Foundation (WARF) is seeking commercial partners interested in developing a new set of compounds for reducing body fat and increasing lean body mass.

OVERVIEW

Conjugated linoleic acids (CLA) are compounds that reduce body fat in humans and animals while increasing lean body mass. At the cellular level, CLA decreases the level of arachidonic acid (AA), a molecule that is oxidized by cyclooxygenase or lipoxygenases to produce products such as prostaglandins and leukotrienes. These compounds in turn exert a wide range of potent physiological effects and are implicated in a number of human diseases, including cancer.

THE INVENTION

In a study designed to better elucidate the relationship between fat reduction and inhibitors of the AA pathway, such as CLA, a team of researchers has shown that inhibitors of lipoxygenases show potential for controlling body fat in humans and other animals. The investigators tested both an inhibitor of cyclooxygenase and an inhibitor of lipoxygenases in an attempt to examine the AA-related effects of CLA. The cyclooxygenase inhibitor failed to show an effect upon the body composition of mice; however, the lipoxygenase inhibitor produced a shift in body composition as well as physiological changes related to fat metabolism that were very similar to CLA. When both CLA and the lipoxygenase inhibitor were fed to mice, the researchers observed an even greater effect on body composition.

APPLICATIONS

- Reducing body fat
- Increasing lean body mass

KEY BENEFITS

- Provides a new set of compounds for reducing body fat and increasing lean body
mass in humans and other animals

- Applicable to a wide variety of animals including dogs, cats, cattle, pigs, chickens and turkeys

ADDITIONAL INFORMATION

Tech Fields
Agriculture - Animal nutrition
Food & Supplements - Nutraceuticals

CONTACT INFORMATION

For current licensing status, please contact Emily Bauer at emily@warf.org or 608-960-9842.