Anti-Obesity Target

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BACKGROUND

The global epidemic of type 2 diabetes is increasing at an alarming rate in both Westernized and developing countries. In the United States alone, it is estimated that there are at least 30 million people with this disease. Metabolic syndrome is 2 to 3 times more prevalent than type 2 diabetes and is usually the precursor state for this disease, indicating that this type 2 diabetes epidemic will not abate in the near future. Insulin resistance is a key etiologic feature of the metabolic syndrome and type 2 diabetes, and obesity is far and away the most common cause of insulin resistance in humans. There is a well-known parallel global epidemic of obesity, and the great majority of type 2 diabetic patients are obese. Therefore, it seems logical to conclude that the obesity epidemic is the underlying driver of the type 2 diabetes epidemic. Unfortunately, at the present time there are a limited number of therapeutics available as way of preventing or treating obesity.

TECHNOLOGY DESCRIPTION

Researchers at UC San Diego have an invention for a method of preventing or treating obesity in a subject via administering an effective amount of an intracellular inhibitor/antagonist to the subject. The inventors previously identified a signature of genes that are associated with food intake. Upon fasting the expression of this target is significantly elevated and levels returned to equivalent *ad libitum* range upon re-feeding. They then used a fasting/re-feeding paradigm in mice to induce hyperphagia and found pre-treatment with a specific inhibitor resulted in significant reduction in food intake. Importantly, obese mice treated with this specific inhibitor for 7 days ate significantly less and lost ~10% of their body weight.

APPLICATIONS

Application of the inhibitors to weight loss or prevention of obesity.

ADVANTAGES

This is a novel invention for treating obesity.

STATE OF DEVELOPMENT

State of development is experimental.

INTELLECTUAL PROPERTY INFO

The technology is patent pending and is available for licensing or collaborations.

PATENT STATUS

Patent Pending

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OTHER INFORMATION

KEYWORDS

Obesity, inhibitor, hyperphagia, gene signature, food intake, type 2 diabetes

CATEGORIZED AS

- Medical
  - Disease: Metabolic/Endocrinology
  - Therapeutics

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