Use of Antagonists of Ghrelin or Ghrelin Receptor to Prevent or Treat Stress-sensitive Psychiatric Illness
Technology #15248

Applications

Methods to reduce excessive negative effects of stress on stress-sensitive mental illnesses. This invention could be of great interest to pharmaceutical companies that have developed strategies for reducing the actions of ghrelin, which are typically used to treat obesity, diabetes, and diseases involving overeating, by providing a new application venue.

Problem Addressed

Currently there are no pharmaceuticals that can be used to prevent the exacerbation or development of stress-sensitive mental illnesses; therefore, these conditions are treated with the same compounds as the ones used to treat other mental illnesses, such as selective serotonin reuptake inhibitors (SSRIs), even though these drugs do not provide any clinical benefit to a significant number of patients diagnosed with stress-sensitive mental illnesses.

Technology

This invention pertains to several surprising discoveries linking chronic exposure to ghrelin with excessive negative emotional states, which have been believed to be the result of exposure to glucocorticoids. Ghrelin is a peptide hormone produced by the stomach, and the receptors for ghrelin are most extensively expressed in hypothalamus regions that control feeding behavior. Recently, it has been shown that ghrelin secretion is stress-induced, fully independent of glucocorticoids, and that repeated agonism of the ghrelin receptor potentiates negative emotional states. Ghrelin levels become gradually elevated with repeated exposure to stress and persist for many weeks beyond the termination of the stress. This invention provides methods comprising administration of a therapeutically effective amount of anti-ghrelin agent to human during exposure to prolonged stress (such as combat missions, search, and rescue operations, rebuilding after natural disasters) or patients who may be diagnosed with any one or more of the stress-sensitive illnesses, such as Post-Traumatic Stress Disorder (PTSD), Depressive Disorder, Major Depressive Disorders, Bipolar Disorder, Acute Stress Disorder, Generalized Anxiety Disorder, Obsessive-Compulsive Disorder, Panic Disorder, and Trichotillomania.

Advantages

- Drugs with a novel mechanism of action, targeting the ghrelin system, may be beneficial for patients who are resistant to more traditional avenues of treatment
- Having a drug which can be given to humans following trauma exposure might reduce the incidence of trauma-induced disorders such as PTSD
Categories For This Invention:

Life Sciences
Clinical Applications
Mental Health
Therapeutics

Intellectual Property:

Use of antagonists of ghrelin or ghrelin receptor to prevent or treat stress-sensitive psychiatric illness
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Publications:

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A Ghrelin–Growth Hormone Axis Drives Stress-Induced Vulnerability to Enhanced Fear
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