Use of Ghrelin or Functional Ghrelin Receptor Agonists to Prevent and Treat Stress-sensitive Psychiatric Illness
Technology #17701

Applications

Methods to reduce the development of stress-sensitive mental illnesses. This invention could be of great interest to pharmaceutical companies that have developed ghrelin or ghrelin receptor agonists, which are typically used to treat other disease conditions such as cachexia and muscle loss, by providing a new application avenue.

Problem Addressed

Currently there are no pharmaceuticals that can be used to prevent the exacerbation or development of stress-sensitive mental illnesses, and 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 a key surprising discovery linking post-stress ghrelin level and the strength of long-term emotional memories. Ghrelin, a peptide hormone produced primarily by gastrointestinal cells, has been extensively studied for its ability to induce feeding behavior. Recently, it has been found that ghrelin is modulated by exposure to stress. A therapeutically effective amount of either ghrelin or a functional ghrelin receptor agonist can be administered to humans shortly after trauma exposure can prevent the development of stress-sensitive mental disorders, 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, Schizophrenia 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

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Publications:

A Ghrelin-growth Hormone Axis Drives Stress-induced Vulnerability to Enhanced Fear
Molecular Psychiatry
2014

External Links:

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