Discovery of Novel Multivalent/Multifunctional Ligands with μ/d Opioid Agonist (μ-Preferring)/Neurokinin 1 (NK1) Antagonist Activities for the Treatment of Pain

Published date: Feb. 24, 2015

Technology description

Invention:
The present invention is a novel peptide used in the treatment of chronic pain with opioid therapy with a reduction of unwanted side effect such as mental clouding, nausea and emesis, and constipation. These peptide-based ligands are able to interact with CNS receptors separately to produce a higher analgesic effect with no opioid-induced tolerance.
Background:
Approximately 1.5 billion people worldwide suffer from chronic pain. Acute and chronic pain among military personnel and veterans is particularly prevalent, with some studies showing greater than 80% of Operation Enduring Freedom and Operation Iraqi Freedom vets suffering from chronic pain. Additionally, almost 30% of veterans seek treatment for chronic pain. Opioids are currently the primary treatment option for veterans suffering from chronis pain due to severe injuries, post-traumatic stress disorder (PTSD), and traumatic brain injury (TBI). The opioid therapy is accompanied with serious unwanted effects that makes the patient’ s life miserable.

Application area

This invention may be used to treat pain, especially chronic pain.

Advantages

This invention has been demonstrated to be outstanding in several fields, such as:
• Longer In-vitro Metabolic stability
• Higher Lipophilicity
• Better Biological profiles
• Better synergistic effect

Institution

University of Arizona

Inventors

Victor Hruby
Regents Professor Emeritus
Chemistry & Biochemistry
Aswini Giri
Assistant Research Scientist
Chemistry & Biochemistry

联系我们

叶先生

电 话：021-65679356
手 机：13414935137
邮 箱：yeyingsheng@zf-ym.com