Novel Peptide Derived from Human Apolipoprotein E Inhibits Hepatitis C Virus Entry

Published date: July 5, 2012

Technology description

The University of South Carolinais offering licensing opportunities for this novel method of blocking and/or treating Hepatitis C Virus.
Invention Description:
This invention is a human apolipoprotein E (apoE) peptide, designated hEP. hEP blocks Hepatitis C Virus (HCV) entry into hepatocytes. This peptide specifically blocks HCV entry at the attachment step and is effective at sub-micromolar concentrations. Analyses of hEP mapped its anti-HCV activity to a 33 amino acid-long region that harbors the receptor binding domain of human apoE. These results highlight the potential for developing a new class of entry inhibitors targeting these processes.

Application area

This peptide offers a novel therapeutic agent for HCV patients. In addition, this peptide has also been shown to exert plasma LDL cholesterol lowering and anti-inflammatory effects. Further investigation will show if hEP yields multifold benefits for HCV infected subjects in clinical trial, including (1) reducing plasma LDL particles, which serve as transport carriers for HCV, (2) blocking the spreading of HCV to new cells, and (3) attenuating local and systemic inflammation resulting from HCV infection. If confirmed, hEP could be used in combination with other anti-HCV drugs for potential synergistic effects in treating HCV infections.

Advantages

This peptide may exert multifold beneficial effects on HCV-infected patients.
This peptide can be produced either by standard peptide synthesis technique or by recombinant technique.

Institution

University of South Carolina

Inventors

Shufeng Liu
Daping Fan
Assistant Professor
Cell Biology & Anatomy, SOM
Tianyi Wang

联系我们

叶先生

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