

First-in-class Targeted Therapy for Acute Kidney Injury (AKI)

Tech ID: 29829 / UC Case 2017-097-0

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OTHER INFORMATION

KEYWORDS

Acute Kidney Injury (AKI),
WFDC2, Treatment, Protein

CATEGORIZED AS

- ▶ **Medical**
 - ▶ Disease: Kidneys and Genito-Urinary System
 - ▶ Therapeutics

RELATED CASES

2017-097-0

INVENTION NOVELTY

This invention provides the first-in-class targeted therapy for acute kidney injury (AKI) by systemically administering protein WFDC2.

VALUE PROPOSITION

AKI is sudden damage to the kidney, leading to impaired kidney function and significant build-up of waste products in the blood that can negatively affect other organs such as the brain, heart and lungs. AKI is also a major contributor to chronic kidney disease. Its causes are complex, but common contributing disorders include sepsis, ischemia, major surgery and nephrotoxic drugs.

It is a major clinical problem, occurring in 1-7% of hospitalizations and 25% of ICU admissions. Mortality can be as high as 50-70% of ICU patients and it is associated with 700,000 deaths a year in Europe, the US and Japan. Unfortunately, there is currently no effective treatment for AKI.

Our researchers have developed a new treatment for AKI by using human WFDC2 protein, which when administered, helps kidney cells recover. This is advantageous over current therapies, which are only supportive in nature.

TECHNOLOGY DESCRIPTION

Researchers at UCSF and Fudan University have developed the first specific therapy for the treatment of AKI, using recombinant WFDC2 protein. WFDC2 was initially found to be released by kidney cells after acute injury. WFDC2 is a small, stable protein that is easily produced by standard recombinant DNA technology and is effective when administered intravenously in a mouse model of AKI.

APPLICATION

Treatment of AKI

LOOKING FOR PARTNERS

To develop and commercialize this technology as an effective therapy for AKI.

STAGE OF DEVELOPMENT

Preclinical

DATA AVAILABILITY

Animal Studies

PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	11,439,695	09/13/2022	2017-097

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