

Suppressing Cardiac Arrhythmia And Pump Dysfunction With Ischemia/Reperfusion And Failure

Tech ID: 33883 / UC Case 2023-803-0

BRIEF DESCRIPTION

SUMO inhibitors offer a promising new therapy for protecting against cardiac rhythm disturbances and pump failure associated with heart attacks.

FULL DESCRIPTION

Researchers at the University of California, Irvine have developed a technology involving SUMO inhibitors to prevent the abnormal opening of heart sodium channels during hypoxia, a condition leading to angina and heart attacks. The inhibitors work by blocking the attachment of SUMO proteins to the sodium channels, a process that is crucial for the development of late sodium current, which is implicated in cardiac dysfunction during heart attacks.

SUGGESTED USES

- » Pharmaceuticals for heart disease treatment.
- » Preventive treatments for individuals at high risk of heart attacks.
- » Therapeutic agents for managing angina and heart failure.

ADVANTAGES

- » Prevents abnormal late sodium current in heart muscle cells.
- » Protects against cardiac rhythm disturbances.
- » Prevents pump failure during heart attacks.
- » Effective in both in vitro and mouse model studies.
- » Potential for human application to treat angina, heart attacks, and heart failure.

PATENT STATUS

Patent Pending

STATE OF DEVELOPMENT

In vitro and mouse model studies

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OTHER INFORMATION

CATEGORIZED AS

- » **Medical**
 - » Disease: Cardiovascular and Circulatory System
 - » Gene Therapy
 - » Therapeutics

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