

Request Information

Permalink

# 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

## CONTACT

Ronnie Hanecak  
rhanecak@uci.edu  
tel: 949-824-7186.



## OTHER INFORMATION

## CATEGORIZED AS

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

## RELATED CASES

2023-803-0

**UCI** Beall  
Applied Innovation

5270 California Avenue / Irvine, CA  
92697-7700 / Tel: 949.824.2683



© 2024, The Regents of the University of  
California  
[Terms of use](#)  
[Privacy Notice](#)