



TECHNOLOGY LICENSING OFFICE

4301 West Markham Street, #831

Little Rock, AR 72205

501.686.6696

email: nmgray@uams.edu

BV 2010-05 - *Compositions and Methods for Improved Organ Transplant Outcomes: Tissue Protection During Transport and Storage*

APPLICATION: Protection against injury to organs or tissues during pre-transplant storage and transport

KEY BENEFITS:

- Improved outcomes for transplanted organs
- Better preservation of organs will mean greater availability of organs

MARKET SUMMARY: Approximately seventy thousand organ transplants are performed each year, and the number continues to grow. Approximately 60% of those transplants involve kidney transplants. There is a growing list of people in need of organ transplants, and better methods are needed to preserve available organs. Current research has demonstrated that increased oxidant and free radical production contributes to organ damage prior to and following organ transplantation. Cold preservation and ischemia contribute to the deterioration of the organs and tissues during the period of organ isolation while testing for a suitable recipient is performed. This damage limits the number of organs available for transplantation and can lead to limited function of a transplanted organ.

TECHNICAL SUMMARY: The present invention provides a composition for the cold storage of organs which reduces oxidation effects of cold storage and reduces the oxidative damage to an organ or tissue. The composition comprises a biochemical substrate that is targeted to the mitochondria and functions as an electron transporter to stabilize various reactive oxygen species that are one source of tissue and organ damage. The composition is the property of a third party with which the University is currently collaborating. The methods of use for this are the proprietary information of the University. The composition includes a mitochondrial specific antioxidant moiety related to the lipophilic electron transporter called coenzyme Q10 that is covalently attached to a triphenylphosphonium cation. This invention could make available much greater numbers of human organs for transplantation, reduce the number of discarded human organs prior to transplantation and improve the outcomes for organs that have been transplanted.

**BV 2010-05 - Compositions and Methods for Improved Organ Transplant Outcomes:
Tissue Protection During Transport and Storage**
Continued

DEVELOPMENTAL

Solution tested in animal model

STAGE:

PATENT

App Type: NonProv

INFORMATION

Country: US

AND CONTACT:

Serial No.:

Patent No.: 9,258,995

File Date: 11/20/2009

Issue Date: 02/16/2016

Inventor(s): Lee Ann MacMillan-Crow

Tech ID: 1005

Contact: Joe Underwood, Associate Director – Licensing, junderwood@uams.edu