Aqueous solution for a better preservation of tissues and organs before transplantation

- The present invention relates to a new aqueous solution for a better preservation of tissues and organs, including subject to prolong ischemic periods.
- A patent has been filed and entered into national phases in EU, US, Canada, Brazil, Russia and Mexico
- The use of this solution increases the use of organs that are currently discarded for transplantation (marginal organs like steatotic livers).

Opportunity

Organ transplantation is the treatment of choice for patients with end-stage organ failure states. The preferred method of organ preservation is simple cold storage, which involves flushing the organ with a preservative solution and storing them at 0º C to 4º C prior to transplantation. Cold static storage is an effective method of organ transplantation during short period of ischemia.

There are different preservation solutions in the market; however any of them protect against the irreversible injury occurring after prolonged cold periods (between 16 h and 24 h).

Unmet need

The injury of graft during cold ischemia and the subsequent reperfusion is still an unresolved problem in the clinical practice. Moreover, the use of marginal organs such as steatotic livers is associated with an increased risk of primary non-function or dysfunction after surgery.

We have developed a new aqueous solution for a better preservation of tissues and organs with the following advantages:

- It increases the preservation capacity of tissues and organs subject to prolong ischemic period.
- It could increase the use of organs that nowadays are discarded for transplantation (marginal organs like steatotic livers).
- This could result in less delayed graft function and, in turn, improved long-term graft survival, increasing the amount of available organs for transplantation.

Inventors

This technology has been developed by Dr. Carmen Peralta, Dr. Joan Rosselló-Catafau, Dr. Ismail Ben Mosbah and Dr. Ramon Bartrons.

Dr. Carmen Peralta is the principal investigator leading this project. She is a researcher in the Liver Transplantation and Graft Viability Group at IDIBAPS. Her research focuses in the study of pharmacological and surgical strategies protective against liver damage induced by ischemia.

Intellectual Property

A patent application was filed in May 2008 for this opportunity. It has entered in national phases in EU (http://es.espacenet.com/publicationDetails/biblio?DB=lp.espacenet.com&II=0&ND=3&adjacent=true&locale=es_LP&FT=D&date=20130201&C_C=ES&NR=2394559T3&KC), US, Brazil, Russia, Canada and Mexico in the period 2010-2011.

Commercial Opportunity

Fundació Clínic per la Recerca Biomèdica (FCRB) is seeking an industrial partner for licensing and collaboration to further develop this solution to take it into the market.

FCRB, IDIBAPS, CSIC and UB

FCRB works in partnership with IDIBAPS, UB and CSIC. These institutions are amongst the most productive scientific and medical communities in Spain.