



HEMO2PERF®

PRECLINICAL EVALUATION OF HEMO2LIFE®, A SOLUTION FOR CONSERVING RENAL TRANSPLANT ORGANS BASED ON MARINE WORM EXTRACELLULAR HAEMOGLOBIN

Organ transplant is the preferred treatment for terminal organ failure. Given the current lack of donors for the number of people waiting for a transplant, one solution involves improving the protocols for conserving organs to increase the pool of potential donors. The Hemo2perf® research project focused on oxygenating organs during the conservation protocols to prevent ischemia-reperfusion injuries that result in organ rejection and to increase the potential of donors meeting expanded criteria.

The preclinical project used HEMO2life®, naturally occurring extracellular haemoglobin extracted from marine worms, to release oxygen in response to an organ's needs and thus improve preservation of kidneys for transplant. An entirely innovative approach was taken to evaluating the effectiveness of this type of oxygen carrier. The ambitious nature of the project lay in the use of a preclinical model for marginal kidney transplants, combined with the use of clinical conservation protocols, in order to assess the benefits of HEMO2life®.

Spin offs and future developments

The overall results for conservation of marginal kidney transplants showed:

- A benefit in using HEMO2life® for static preservation over other methods used alone
- A potential benefit for other methods when used alongside HEMO2life®.

HEMO2life® is able to prevent fibrosis 3 months post transplantation. HEMO2life® modulates the release of certain anti-free radical agents and potentially lessens the effects of oxidative stress incurred during

Partners

COM_PROJECTS_CATEGORIE_PARTNER_ENTREPRISES

Hemarina, Morlaix [\[Project Developer\]](#)

Research center

Unité INSERM U927, CHU de Poitiers

Funder

- Agence Nationale de la Recherche

Labelisation

16/12/2011

Overall budget

1 085 K€

ischemia-reperfusion.

The HEMO2perf project enabled Hémarina to demonstrate the benefits of HEMO2life® and to substantiate the product's regulatory technical file for submission of a clinical trial authorisation request.

- Papers presented at two international conferences
- Collaboration with the San Matteo IRCCS Polyclinic in Italy