

Heart Replacement with Humanised Porcine Organs in Non-human Primates and Finally in Humans

Creating an alternative in a world with life-limiting organ shortage

Reference: Heart Replacement



Source: <https://stock.adobe.com/uk/213602165>

IP Status

Patent application submitted

Seeking

Commercial partner, Seeking investment

About **LMU Munich**

Ludwig-Maximilians-Universität München is the University in the heart of Munich. LMU is recognized as one of Europe's premier academic and research institutions. The LMU Munich community is engaged in generating new knowledge for the benefit of society at large.

Background

Supported since 1998, first by the Bavarian then the German Research Foundation (DFG). The Consortium includes basic immunologists, bio-engineers, virologists, biochemists, ethicists and clinicians.

Tech Overview

XTransplant will revolutionize the treatment of patients with terminal heart failure by providing high-quality xenogeneic donor organs from IP-protected genetically modified donor pigs.

Figure 1

Further Details

- Längin M et al: Consistent Success in Life-Supporting Cardiac Xenotransplantation, Nature, 2018, 564, 430-433, 10.1038/s41586-018-0765-z
- Reichart B et al: Pig-to-non-Human Primate Heart Transplantation: the Final Step Toward Clinical Xenotransplantation? J Heart Lung Transplant, 2020, 39, 751-757, 10.1016/j.healun.2020.05.004
- Reichart B et al: Pathway to Clinical Cardiac Xenotransplantation, Transplantation, 2020, 10.1097/TP.0000000000003588

Stage of Development

Consistent long-term results in the pig-to-baboon heart replacement model; internationally accepted preclinical proof. Work on regulatory procedures with Paul-Ehrlich-Institute/EMA started.

Benefits

- Unlimited supply of donor hearts
- Worldwide leader In the field
- When compared with mechanical circulatory support systems: xenogeneic hearts are non-thrombogenic, hence there is no need for anticoagulation (blood thinner); carry a low infectious risk

Applications

In the Eurotransplant region and USA the annual waiting list for a heart transplant amounts to >4,500; assuming a price for a xeno-heart of € 100-200k, the near term market potential is >€ 0.5b.

Opportunity

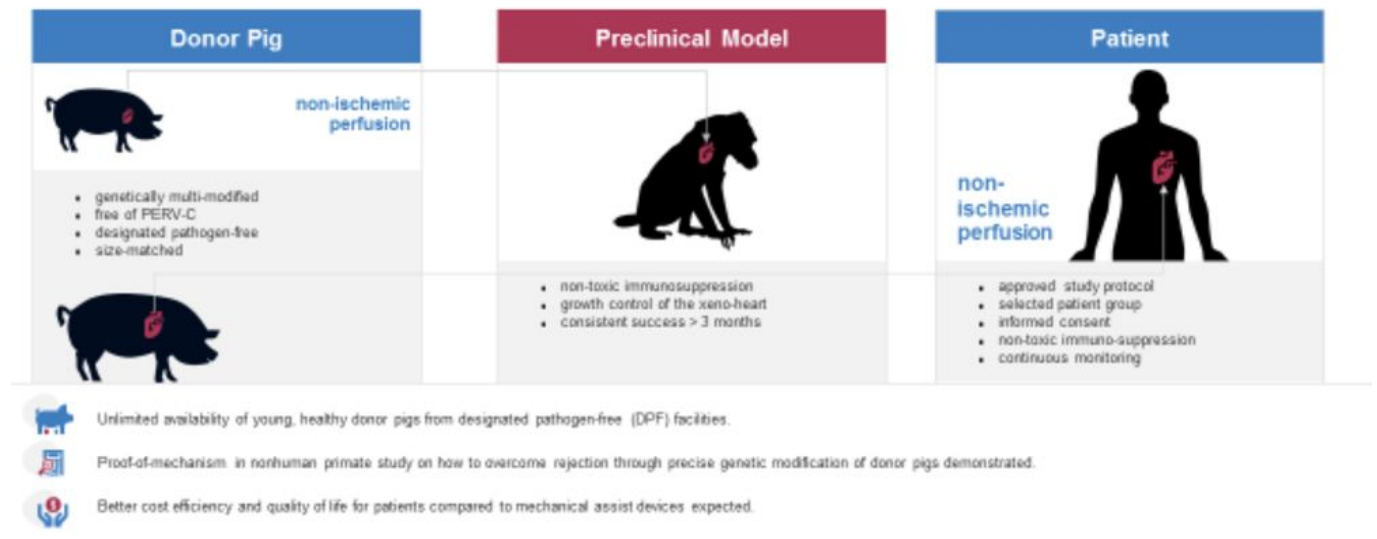
Generating a world-wide monopoly in the field of xenogeneic heart transplantation.

Patents

- Patent application submitted: WO2019/185936 A2: Methods and compositions for prolonging the survival after orthotopic and heterotopic xenogeneic heart, kidney , lung or liver transplantations

Appendix 1

Figure 1



For further information, please contact us.

Ludwig-Maximilians-Universität München (LMU Munich)

Office for Research and Technology Transfer

- Corporate Partnerships -



Dr. Barbara Blaurock

+49(0)89 2180-722 13



Dr. Laura Gerwin

+49(0)89 2180-722 12

corporatepartnerships@lmu.de

www.lmu.de/researchservices/corporatepartnerships/