



**PRESS RELEASE**

January 10, 2022

Gothenburg

## **XVIVO's innovative preservation technology used in the world's first ever successful heart xenotransplantation (pig to human)**

**On January 7, 2022, the world's first ever successful pig to human heart transplantation took place, a groundbreaking milestone for the field of transplantation. A team at the University of Maryland School of Medicine, USA, performed the procedure. The recipient was a 57-year-old terminally ill man who received a heart from a gene-modified pig. After retrieval, the pig heart was preserved with XVIVO's heart perfusion device and proprietary solution until transplanted.**

Organ shortage is the greatest challenge facing the transplant field today. Consequently, only a small number of patients with end stage heart disease is given the opportunity of a transplant and many die while waiting for a new organ. A potential solution to this critical shortage is xenotransplantation, which means transplantation between species.

Groundbreaking research, utilizing XVIVO's heart preservation technology, has in recent years achieved long-term survival after xenotransplants of hearts from gene-modified pigs to primates. Based on this extensive research the first ever transplantation of a heart from a genetically modified pig to a human has now taken place.

The patient did not qualify to receive a conventional human organ transplant, and due to his terminal heart disease, xenotransplant was the only available option for his survival. He is still doing well three days after the historic surgery.

XVIVO has developed a novel method for storing and transporting donated hearts in an optimized way, through non-ischemic heart preservation (NIHP) in collaboration with Professor Stig Steen and Igelösa Life Science in Lund, Sweden. The XVIVO heart perfusion device preserves the donor heart at 8 C° while continuously pumping an oxygenated, propriety solution through the organ. The first transplants with human donors have successfully been performed and several clinical trials at leading transplant centers in Europe and Australia are ongoing. In 2019, XVIVO's new heart technology was granted 'Breakthrough Device Designation' from the U.S. Food and Drug Administration (FDA) and a multicenter clinical trial is planned in the US for 2022.

The new heart preservation technology is intended for clinical human to human transplants, but it has also been demonstrated to be pivotal for long term survival in pre-clinical research using pig hearts for xenotransplantation by mitigating the risk of early organ dysfunction.

Muhammad M. Mohiuddin, MD, Professor of Surgery at the University of Maryland School of Medicine, has been involved in the field of xenotransplantation since 1992. "I'm together with Dr Bart Griffith heading a large and highly-skilled team, and together we made this happen. Many years of research and preclinical efforts by us and others led us to this point. The transplanted patient had a life-threatening condition with no satisfactory alternative therapy. I am happy to say that his progress is on the track and he is in very good spirit. Without XVIVO's new heart technology this transplant would never have happened, and I am grateful for all support we have received", says Professor Mohiuddin.

"In a future where xenotransplants can help solve the donor organ shortage we are truly living our vision that nobody should die waiting for a new organ. We have always been in the forefront of organ technology and innovation. Therefore, it is nothing more than a true honor to be part of this first ever successful cardiac pig to human xenotransplant that could bring additional hope for patients on the waiting list. To me, this is the ultimate proof that collaboration between scientists, clinicians and the industry is making the world a better place", says Dag Andersson, XVIVO CEO.

Please follow the link to the press release from the University of Maryland School of Medicine:  
**<https://www.umms.org/ummc/news/2022/first-successful-transplant-of-porcine-heart-into-adult-human-heart-disease>**

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**About Us**

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Founded in 1998, XVIVO is the only medical technology company dedicated to extending the life of all major organs - so transplant teams around the world can save more lives. Our solutions allow leading clinicians and researchers to push the boundaries of transplantation medicine. XVIVO is headquartered in Gothenburg, Sweden, and has offices and research sites on two continents. The company is listed on Nasdaq and has the ticker symbol XVIVO. More information can be found on the website [www.xvivogroup.com](http://www.xvivogroup.com).

**Attachments**

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