



## **Realheart and Linköping University together in the forefront of blood flow analysis**

*Blood flow analysis is the focus of a new interdisciplinary project. Linköping University and Realheart collaborate to verify and optimize the blood flow in Realheart's artificial heart.*

Realheart mimics the way the natural heart pumps blood. This is a big advantage over competing solutions because it leads to a more favourable treatment of the blood and thus fewer complications. Superior blood treatment is expected to lead to a strong position in the market when launching the product and at the same time facilitate approval of the product by FDA, the US certification authority for medical devices. Before FDA can approve Realheart, the methods need to be verified.

### **Realheart invests in blood flow analysis focused on implantation in humans**

With the aim to measure, optimize and minimize the impact Realheart TAH has on blood, Realheart invests in blood research. One example is computational flow analysis in collaboration with Bath University. And earlier this year, a blood lab was established together with Karolinska Institutet in Stockholm.

Now, the Västerås company together with Linköping University is starting a collaboration that will lead to further optimization with the aim of achieving the best results when Realheart TAH is implanted in humans. This is done through a specially made prototype of the heart that will be used in some of the world's most advanced X-ray machines to create an exact digital twin of Realheart TAH.

The research takes place at the Centre for Medical Imaging and Visualization (CMIV) at Linköping University. They conduct frontline research in the development of future methods and tools for image analysis and visualization in relation to health care and medical research. The project is part-financed by the MeDigiT platform (Medical Digital Gemini), whose goal is to facilitate the use of individual-specific digital models in healthcare. The research team is led by Professor Tino Ebbers, a leading researcher in blood flow analysis. The team will work together with Realheart's CEO Azad Najjar, who has also been offered a research position to later be able to do a PhD in the subject.

"It is an honour to do research together with some of the world's most talented in this field. We have been innovative in the development of a unique heart pump and now we are once again innovative in finding new methods to visualize and verify blood flow. I look forward to working with the team and putting another piece of the puzzle in place to create an artificial heart in a class of its own," says Azad Najjar, CEO and founder of Realheart.

### **For more information please contact:**

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*Scandinavian Real Heart AB develops a total artificial heart (TAH) for implantation in patients with life-threatening heart failure. Realheart TAH has a unique, patented design that resembles that of the natural human heart. The artificial heart consists of a four-chamber system (two atriums and two chambers) which provides the opportunity to generate a physiologically adapted blood flow that mimics the body's natural circulation. A unique concept in the medical technology world.*