

Realheart's Preclinical Study Presenting a Unique Computational Model Recognized With the ESAO-SAGE Research Award

Västerås, October 1, 2024 – Scandinavian Real Heart AB (publ) announces today that the company has published a preclinical study describing a novel method to simulate hemolysis in artificial heart devices that utilize pumping mechanisms. This unique method will be important in the further development of Realheart® TAH. Based on its innovative height, the study was recognized with the ESAO-SAGE Research Award at the 50th European Society for Artificial Organs Congress 2024.

The breakdown of red blood cells (hemolysis) in mechanical devices that circulate blood (MCS) is still a safety issue due to consequential side effects, e.g., thrombosis. It is therefore important to reduce the risk of hemolysis from devices that seek regulatory approval for clinical use. In a recent study, Realheart, and its academic partner University of Bath, describe a newly-developed simulation model for MCSs that utilize back-and-forth (positive-displacement) pumping mechanisms. Such simulations have historically been based on devices that spin to pump blood, thus limiting the applicability to Realheart® TAH. This novel method, and the study results, will be important in further improving the hemolytic profile of Realheart® TAH and in providing essential safety information to regulatory agencies.

The study was recognized with the ESAO-SAGE Research Award at the 50th European Society for Artificial Organs Congress, earlier in September. The awardee is selected by a Special Committee based on a manuscript published in the International Journal for Artificial Organs, which is presented at the Annual ESAO Congress.

“The insight from this study is unique as it is the first time an artificial heart with four valves, of which two are also moving, has been simulated. It has been a challenging study that our academic partner University of Bath have taken on and excelled at. The results provide an excellent basis for further understanding of functional valve movements in Realheart® TAH to further optimize the control of the heart and the scale of the product components when developing new devices of varying sizes, such as MINIheart,” says Ina Laura Perkins, CEO of Realheart.

Read the full article: www.journals.sagepub.com/doi/pdf/10.1177/03913988241267797

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About Us

Scandinavian Real Heart AB (publ) is developing the first artificial heart that mimics the shape, function, and blood flow pattern of the human heart. These unique product features provide completely new opportunities to save lives and give patients a good quality of life while waiting for a heart transplant. Realheart® TAH (Total Artificial Heart) is now being evaluated in extensive preclinical trial models ahead of a first clinical study in patients. In the future, artificial hearts may also become an alternative to transplantation for broader groups of patients with severe heart failure. The company's shares are traded on Nasdaq Stockholm First North Growth Market. For more information, visit www.realheart.se