

Realheart to Present Positive Results From Two Preclinical Studies Evaluating Treatment Safety of Its Total Artificial Heart at ISMCS 2024

Västerås, September 5, 2024 – Scandinavian Real Heart AB (publ) announces today that the company will present new data from two successful preclinical studies evaluating the treatment safety of its total artificial heart Realheart® TAH at the 30th Annual Meeting of the International Society for Mechanical Circulatory Support (ISMCS) 2024, November 13–15th, in Utsunomiya, Japan.

As part of the preclinical development program of Realheart® TAH, the company has evaluated the mechanical stress effects of its total artificial heart on human blood, as well as its capability to respond adequately to varying blood flow demands in the cardiovascular system. In the current studies, the performance of Realheart® TAH was compared to a market-leading product.

Results from the first study show that Realheart® TAH preserves von Willebrand factor (vWF) – a protein that is essential for blood clotting and prevention of internal bleeding. Internal bleeding is a common and challenging side effect of currently available heart pumps. Therefore, protection of blood clotting proteins is essential. Additionally, the study reaffirms previously reported data that Realheart® TAH has a low shear stress effect on red blood cells, resulting in low levels of blood damage (hemolysis) compared to the competitive system.

The second study utilized Scandinavia's first simulated patient (hybrid simulator) connected to a virtual model of the human cardiovascular system to evaluate the capability of Realheart® TAH to adapt to the varying physiological demand of the patient, e. g., responding to higher blood flow needs during moderate exercise. The collaborators (Prof. Seraina Dual) at KTH Royal Institute of Technology evaluated the TAH performance by measuring cardiac output (CO), the amount of blood pumped through the TAH per minute, and the mean arterial pressure (MAP), the average blood pressure in the arteries. The results show that Realheart TAH produces a higher CO, similar to that of the natural heart, as well as a more stable MAP, compared to the competitive system during moderate exercise.

“We are very happy to present continued positive results from our preclinical program, showing the high treatment safety profile of our total artificial heart. The data provides an important addition to our documentation and puts us one step further toward the clinical evaluation of Realheart® TAH. We look forward to presenting and discussing the new data at the ISMCS 2024 in November,” says Ina Laura Perkins, CEO of Realheart.

Read more about ISMCS 2024: www.ismcs.org/ismcs-2024

This study was partly funded by the Strategic Innovation Program Smartare Elektroniksystem – a collaborative initiative by Vinnova, Formas and Energimyndigheten.



PRESS RELEASE

05 September 2024 12:55:00 CEST

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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