Dr Katharine Fraser's Realheart study published in Artificial Organs

Realheart collaborates with a number of international scientists developing the world's first four-chamber artificial heart. This includes developing a method to study blood flow in the pump using computer simulations in collaboration with Dr Katharine Fraser of the University of Bath. The results of the study are now published in the journal Artificial Organs.

Dr Katharine Fraser is a lecturer in the Department of Mechanical Engineering at the University of Bath. She works on different types of mechanical support devices for patients with severe heart failure and uses computer simulations and numerical models to study blood damage caused in such devices.

She also leads a research team including a co-funded PhD student, who has carried out a project to create at strategy for using computational fluid dynamics (CFD) to simulate the dynamics governing blood flow in the Realheart artificial heart. In her article, detailing the background, methodology, and results, she concludes that good agreement between computational and experimental data was achieved using this approach.

"One of the things that sets our artificial heart apart from others is that it mimics the way the natural heart works. The purpose is to reduce the risk of blood-related side effects, which have been common historically. This new method will be of great importance as we continue to optimise the product, as will its publication in a trusted scientific journal such as Artificial Organs. It creates greater awareness, trust and interest in our artificial heart," says Ina Laura Perkins, CEO of Realheart.

Artificial Organs is a peer-reviewed biomedical journal that covers organ replacement technology. The journal was founded in 1977 and is published monthly. Katharine Fraser's article "Video based valve motion combined with Computational Fluid Dynamics gives stable and accurate simulations of blood flow in the Realheart Total Artificial Heart" will be published in the next printed issue and has already been published in the journal's online edition.

For more information please contact:

Ina Laura Perkins, CEO

Phone: +46(0)70 406 49 21

E-mail: inalaura.perkins@realheart.se

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.