Press Release

Dualis MedTech and ReliantHeart Partner on Fully Implantable TET System for the HeartAssist5® LVAD

Seefeld/Obb, 07 April 2015 ReliantHeart, Inc., an innovative supplier of advanced mechanical circulatory assist technologies, and Dualis MedTech GmbH, a provider of wireless energy and charging technology, have joined together to implement a wireless, Transcutaneous Energy Transfer system (TET) exclusively for the HeartAssist5® Ventricular Assist Device.

Dualis has agreed to integrate its wireless energy transfer technology MedBase®, with the HeartAssist5® VAD. ReliantHeart’s novel HeartAssist5® (HA5) is the most energy efficient LVAD available.

In its new configuration, the HA5 will draw less than half of the energy of any other full flow LVAD. ReliantHeart refers to this energy efficient pump as being Forward Compatible with future product introduction, including the wireless Transcutaneous Energy Transfer system (TET).

Dualis is an integral part of Forward Compatibility team formed by ReliantHeart to cooperate on an assembly of technologies intended to reduce adverse events associated with LVADs. The team includes several other companies: Lynium, Kollmorgen, Device Solutions, Transonic, Revel Engineering, Numerex, Cathtek, and Yarborough Electronics.

Several months of collaboration culminated in Houston last month, where engineers and product managers from these companies shared a behind-the-scenes tour of the Johnson Space Center, an appropriate setting for both Dualis and ReliantHeart whose roots stem from the aerospace industry. Dualis was formed from the German Centre for Aeronautics and Aerospace, and now implements its technologies for the medical device industry. ReliantHeart’s ventricular pump was developed with NASA technology and was awarded the NASA Invention of the Year.
According to ReliantHeart CEO Rodger Ford; “Dualis is heads and shoulders above most similar teams if its kind. Our partnership is more than just collaboration, it is a crusade to reduce adverse events in the LVAD field. Our mission is to compress time and accelerate beneficial outcomes. Artificial heart pumps need power but running wires through the skin leads to infection and patient discomfort. The solution is to invent a device to transfer power without wires.”

Dualis MedBase® technology will provide this solution by using magnetic coils to transfer power from outside to inside the body with no wires that penetrate the body. It sounds like science fiction, and yet will be available in 2016. Patients with a ReliantHeart HA5 will be able to upgrade to the wireless system without exchanging the pump, thereby eliminating driveline infection. “Patients will be able to enjoy the physical and social activities that are limitless without a wire,” Ford said.

Dualis MedTech GmbH started research and development of the MedBase® technology in 2006 and has since gained a substantial lead in wireless power technology, and conducted successful animal trials. Stephan Sagolla, CEO of Dualis indicated, "The internal coil is about two inches in diameter and will communicate with an internal battery and power management much like a pacemaker system. The patient will be wireless."

ReliantHeart, Inc. is an innovative supplier of advanced mechanical circulatory assist technologies that are changing the approach to the treatment of advanced heart failure. It develops and manufactures the HeartAssist5® Ventricular Assist Device. ReliantHeart’s roots are in Houston, Texas, where it has been generously influenced by the transplant centers of Texas Heart, Methodist DeBakey and Memorial Hermann, and its technology originally inspired by NASA, the Johnson Space Center and Baylor School of Medicine.

Dualis MedTech GmbH is an innovative development service provider which supports its customers from the idea stage right through to the certification of tailor-made systems and products. As a spin-off of the Deutsches Zentrum für Luft- und Raumfahrt (DLR e. V., German Centre for Aeronautics and Aerospace), the company has transferred technology used in aeronautics and applied it to medical technology and also provide services to other sectors such as the automotive supply industry, consumer electronics and machine and plant construction.

Dualis offers manufacturers of medical devices and active implants a fully comprehensive service package for the production, integration and adjustment of MedBase® to their proprietary products. Dualis complies with the extremely demanding regulatory requirements for medical devices.
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