BiVACOR® Awarded Grant to Advance Development of External Controller for its Total Artificial Heart

The grant is matched by in-kind support bringing approximately AUD$2.2 million in funding for BiVACOR's clinical advancement

GOLD COAST, AUSTRALIA, October 27, 2022 /EINPresswire.com/ -- BiVACOR®, a preclinical medical device company developing a Total Artificial Heart, announced today a $750k grant from the Australian Government through its Medical Research Future Fund (MRFF) and Targeted Translation Research Accelerator (TTRA) program. The funds will be used to improve a patient's experience by specifically focusing on reducing the size and weight of the Total Artificial Heart's (TAH) external controller so that the patient will have a better quality of life at home.

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>
> *Daniel Timms, Founder and CTO*

"Our goal is to provide the best possible solution for patients facing end-stage heart failure who have run out of options," said Dr. Thomas Vassiliades, BiVACOR CEO. "The support from the Australian Government and MTPConnect is a testament to the great progress the team has made and encourages our ongoing commitment to address heart failure in Australia and to the importance of the unmet clinical need addressed by the Total Artificial Heart technology. The funds will give us a clinical advantage as we push on perfecting the external controller for the TAH."

The TTRA program, a Medical Research Future Fund initiative delivered by MTPConnect, supports new approaches to improve the prevention, diagnosis, treatment, and management of diabetes and cardiovascular disease complications. This is the second round of funding distributed in the TTRA project and underpins the commitment from the Australian government to support grassroot ideas that have the potential to make a global impact.

"Heart failure hits close to home for me. It remains a leading cause of death worldwide, and its prevalence is only increasing," said Dr. Daniel Timms, Founder and CTO of BiVACOR. "BiVACOR is

an Australian-born innovation, and we are extremely grateful for the ongoing support from the Australian government and community. Without their support, we wouldn't be where we are today, and this grant gives us a boost in the clinic to drill down into the TAH external controller."

BiVACOR's novel technology, the BiVACOR Total Artificial Heart (TAH), is the first long-term therapy dedicated to patients with severe biventricular heart failure. The BiVACOR device is an implantable total artificial heart based on rotary blood pump technology. Similar in size to an adult fist, it is small enough to be implanted in many women and some children yet capable of providing enough cardiac output to an adult male undergoing exercise. The design, using magnetic levitation (MAGLEV) technology, the same principle used in high-speed trains, includes left and right vanes positioned on a common rotor to form the only moving part, a magnetically suspended double-sided centrifugal impeller. Even though there are no valves or flexing ventricle chambers, the pulsatile outflow is made possible by rapidly cycling the rotational speed of the impeller. The non-contact suspension provides large blood gaps minimizing blood trauma and eliminating mechanical wear to offer a durable, reliable, and biocompatible heart replacement.

The BiVACOR TAH builds on the successful transition of Left Ventricular Assist Device (LVAD) technology from volume displacement to durable rotary blood pumps and aims to be the next generation TAH that sufficiently restores quality of life to patients suffering from severe biventricular heart failure. This therapy may be initially utilized as a short-term device in a patient awaiting a heart transplant or as a long-term alternative to heart transplantation.

To date, BiVACOR has raised more than AUD$50 million in funding.

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About BiVACOR®

BiVACOR® is a preclinical stage medical device company developing the BiVACOR Total Artificial Heart (TAH), the first long-term therapy for patients with severe heart failure. The TAH is designed to replace the complete function of the native heart and address the global unmet need of patients with end-stage heart failure (HF) by providing a life-extending solution.

Originating in Australia, BiVACOR maintains its international office in Gold Coast, Australia, and hosts offices in Houston, TX, with engineering operations in Huntington Beach, CA. The company was founded in 2008 by a team of internationally renowned biomedical engineers and cardiac surgeons. CTO Daniel Timms, Ph.D., founded the organization along with Chief Medical Officer William Cohn, MD, and is supported by a scientific advisory board led by Dr. O.H. Frazier, comprised of veteran surgeons, inventors, and researchers devoted to developing technologies to fix or replace the human heart.
Today, BiVACOR has a robust collaborative network that extends nationally and internationally and boasts a team of world-class engineers, medical specialists, and business executives fervent

to advance this ground-breaking technology.

The company benefits today from 12 patents granted in 7 countries and 13 additional patent applications.

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