PRESS RELEASE

CARMAT announces first implant of its total artificial heart in a female recipient

The procedure was performed at UofL Health - Jewish Hospital by University of Louisville physicians in the first cohort of the U.S. Early Feasibility Study

Paris, September 21, 2021 – 7:00 am CEST

CARMAT (FR0010907956, ALCAR), the designer and developer of the world's most advanced total artificial heart, aiming to fulfill an unmet medical need by providing a therapeutic alternative to people suffering from end-stage biventricular heart failure, announces the first implant of its bioprosthetic artificial heart, Aeson®, in a female recipient.

The implant procedure was performed by a team led by Dr. Mark S. Slaughter, Professor and Chair of the Department of Cardiovascular and Thoracic Surgery at the University of Louisville and UofL Physician at Jewish Hospital, Louisville, Kentucky, within the framework of the first cohort of 3 patients of the U.S. Early Feasibility Study (EFS). The recipient is a 57-year-old woman who was suffering from severe biventricular heart failure and had undergone cardiac surgery several years before.

Mark S. Slaughter, MD, heart surgeon at UofL Health - Jewish Hospital and University of Louisville, and principal investigator of the study, stated: *"The Aeson® artificial heart is compact enough to fit inside smaller chest cavities, more frequently found in women, which gives hope to a wider variety of men and women waiting for a heart transplant and increases the chances for success. With our second Aeson® implant within one month, we are quickly gaining experience, including patients who underwent previous cardiac surgery, and continue to be impressed by the performance of the device."*

Stéphane Piat, Chief Executive Officer of CARMAT, concluded: *"This 3rd implant in the US was a landmark event not only because it allowed us to finalize the enrollment of the first cohort of patients of the EFS, but very importantly because it is the first time ever that our device has helped a woman suffering from heart failure. This achievement confirms that the size limitations for adults are minimal, which makes us very confident in Aeson®'s potential to become a therapy of choice for a broad patient population."*

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About CARMAT

CARMAT is a French MedTech that designs, manufactures and markets the Aeson® artificial heart. The Company's ambition is to make Aeson® the first alternative to a heart transplant, and thus provide a therapeutic solution to people suffering from end-stage biventricular heart failure, who are facing a well-known shortfall in available human grafts. The world's first physiological artificial heart that is highly hemocompatible, pulsatile and self-regulated, Aeson® could save, every year, the lives of thousands of patients waiting for a heart transplant. The device offers patients quality of life and mobility thanks to its ergonomic and portable external power supply system that is continuously connected to the implanted prosthesis. Aeson® is commercially available as a bridge to transplant in the European Union and other countries that recognize CE marking. Aeson® is also currently being assessed within the framework of an Early Feasibility Study (EFS) in the United States. Founded in 2008, CARMAT is based in the Paris region, with its head offices located in Vélizy-Villacoublay and its production site in Bois-d'Arcy. The Company can rely on the talent and expertise of a multidisciplinary team of more than 200 highly specialized people. CARMAT is listed on the Euronext Growth market in Paris (Ticker: ALCAR / ISIN code: FR0010907956).

For more information, please go to www.carmatsa.com and follow us on LinkedIn.

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*The significant and specific risks pertaining to the Company are those described in the Universal Registration Document ("*Document d'Enregistrement Universel") *filed with the* Autorité des Marchés Financiers *(AMF, the French stock market authorities) under number D.21-0076. Readers and investors' attention is, however, drawn to the fact that other risks, unknown or not deemed to be significant or specific, may or could exist.*

Aeson® is an active implantable medical device commercially available in the European Union and other countries that recognize CE marking. The Aeson® total artificial heart is intended to replace the ventricles of the native heart and is indicated as a bridge to transplant in patients suffering from end-stage biventricular heart failure (INTERMACS classes 1-4) who are not amenable to maximal medical therapy or a left ventricular assist device (LVAD) and are likely to undergo a heart transplant within 180 days of the device being implanted. The decision to implant and the surgical procedure must be carried out by healthcare professionals trained by the manufacturer. The documentation (clinician manual, patient manual and alarm booklet) should be read carefully to understand the characteristics of Aeson® and information necessary for patient selection and the proper use of Aeson® (contraindications, precautions, side effects). In the United States, Aeson® is currently exclusively available within the framework of an Early Feasibility Study authorized by the Food & Drug Administration (FDA).