



PRESS RELEASE

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Cardio3 BioSciences receives USPTO Notice of Allowance for first U.S. patent broadly covering TCR-deficient T-Cells engineered to express a chimeric antigen receptor

Fundamental IP has potential broad applicability for development of internal and external allogeneic CAR therapies

Mont-Saint-Guibert, Belgium - Cardio3 BioSciences (C3BS) (*Euronext Brussels and Paris: CARD*), a leader in engineered cell therapies with clinical programs initially targeting indications in cardiovascular disease and oncology, today announced that it has received a Notice of Allowance from the U.S. Patent and Trademark Office (USPTO) for a significant patent application covering T-Cell receptor (TCR)-deficient T-Cells which are engineered to express a chimeric antigen receptor (CAR). This patent application is the first allowed application in a series of filed patent applications augmenting the Company's protection for its allogeneic T-Cell technology. The Company has applied for additional patents related to this technology, which are in various phases of USPTO review.

Allogeneic technology has the potential to optimize CAR T-Cell cancer immunotherapies by enabling the manufacturing of off-the-shelf cell products for the treatment of patients without the need for a genetic match.

The allowed patent application complements and directly strengthens Cardio3 BioSciences' intellectual property portfolio in the CAR T-Cell field. The claims of the allowed application broadly cover isolated TCR-deficient T-Cells (those lacking functional TCRs), which have been further engineered to express a non-TCR receptor, i.e., a ligand binding moiety attached to an immune signalling moiety. We believe the allowed claims will provide valuable protection for the Company as they are not limited to specific methods of generating allogeneic T-Cells, such as genome editing and genetic engineering. The Company believes that this allowed patent application will be an important element of an IP portfolio covering development of allogeneic CAR T-Cells and their use in various immunotherapies.

This allowed patent application, U.S. Application No. 13/502,978, is part of a larger patent portfolio owned by Dartmouth College and exclusively in-licensed by Cardio3 BioSciences through its acquisition of OnCyte, announced on January 6, 2015.

Dr. Christian Homsy, CEO of Cardio3 BioSciences, commented: *"We are extremely pleased to have received the Notice of Allowance from the USPTO for this patent application for TCR-deficient T-Cells engineered to express a CAR, and we are actively pursuing coverage in other countries. To our knowledge, this patent application is the first allowed application regarding TCR-deficient T-Cells suitable for use in allogeneic T-Cell therapies, and we are not aware of any other technology in development for the manufacture of allogeneic T-Cells. Furthermore, the patent provides broad protection because it is not limited to specific methods of generating allogeneic T-Cells, such as genome editing and genetic engineering."*

Dr. Homsy continued: *"Our allogeneic T-Cell platform constitutes a high value asset in our portfolio and we look forward to continuing the development of this platform, for which we expect to have our first T-*



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Cell allogeneic CAR T-Cells entering the clinic in late 2016 or early 2017. We believe that with the acquisition of OnCyte, we have the right technology to enter this highly competitive and promising field."

Cardio3 BioSciences' pipeline includes autologous CAR T-Cell therapies that have the potential to target a broad range of solid tumours and blood cancers. The Company's lead oncology product, CAR-NKG2D, is an autologous therapy expected to enter a Phase I clinical trial in certain hematologic cancers in the second quarter of 2015, which follows the receipt by OnCyte of an Investigational New Drug (IND) clearance from the U.S. Food and Drug Administration (FDA) in July 2014.

The Company's allogeneic T-Cell platform has the potential for broad-based application, as it not only applies to the Company's CAR product candidates, but can also be applied to generate allogeneic CAR T-Cell therapies from external CAR technologies that are currently in development.

Dr. Charles Sentman, Professor of Microbiology and Immunology and Director, Center for Synthetic Immunity, Geisel School of Medicine, Dartmouth College, and lead developer of Cardio3 BioSciences' allogeneic CAR T-Cell platform technology, remarked: *"In developing this allogeneic CAR T-Cell platform, we address a significant unmet medical need by enabling the potential manufacturing of off-the-shelf, ready-to-use immunotherapy cells for the treatment of many cancer patients. In addition, this technology is applicable to both existing and new CAR therapies, meaning that current autologous therapies may be converted to allogeneic treatments and manufactured for broad use."*

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About CAR-NKG2D

Cardio3 BioSciences' lead immune-oncology product candidate, CAR-NKG2D, is a chimeric antigen receptor (CAR) T-Cell autologous therapy to treat cancer. The CAR technology developed by Cardio3 BioSciences uses human natural killer cell (NK cell) receptors which target ligands present on a broad range of solid tumors and blood cancers. The research underlying this technology was originally conducted by Dartmouth College Professor Charles Sentman, and has been published in numerous peer-reviewed publications such as [Journal of Immunology](#) in 2009, [Cancer Research](#) in 2006, and [Blood](#) in 2005. CAR-NKG2D has an active Investigational New Drug (IND) application with the FDA for a Phase I clinical trial in certain hematologic cancers. The primary objective of this dose escalation trial is to assess safety and feasibility in certain acute myeloid leukemia (AML) and multiple myeloma patients.



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About Cardio3 BioSciences

Cardio3 BioSciences is a leader in engineered cell therapy with clinical programs initially targeting indications in cardiology and oncology. Founded in 2007 and based in the Walloon region of Belgium, Cardio3 BioSciences leverages research collaborations in the USA and in Europe with the Mayo Clinic (MN, USA), and Dartmouth College (NH, USA). The Company's lead product candidate in cardiology is C-Cure[®], an autologous stem cell therapeutic using adult guided stem cells for the condition of ischemic heart failure. The Company's lead product candidate in oncology is CAR-NKG2D, an autologous CAR T-Cell product candidate using NKG2D, a natural killer cell receptor designed to target ligands present on multiple tumor types, including ovarian, bladder, breast, lung and liver cancers, as well as leukemia, lymphoma and myeloma. Cardio3 BioSciences is also developing a portfolio of medical devices for enhancing the delivery of bio therapeutic agents into the myocardium (C-Cath_{ez}[®]) and for cardiac surgery involving mitral valve defects.

Cardio3 BioSciences' shares are listed on Euronext Brussels and Euronext Paris under the ticker symbol CARD.

To learn more about Cardio3 BioSciences, please visit www.c3bs.com

Forward looking statements

In addition to historical facts or statements of current condition, this press release contains forward-looking statements, which reflect our current expectations and projections about future events, and involve certain known and unknown risks, uncertainties and assumptions that could cause actual results or events to differ materially from those expressed or implied by the forward-looking statements. These risks, uncertainties and assumptions could adversely affect the outcome and financial effects of the plans and events described herein. These forward-looking statements are further qualified by important factors, which could cause actual results to differ materially from those in the forward-looking statements, including timely submission and approval of anticipated regulatory filings; the successful initiation and completion of clinical trials, including Phase III clinical trials for C-Cure[®] and Phase I clinical trial for CAR-NKG2D, additional clinical results validating the use of adult autologous stem cells to treat heart failure and CAR T-cell autologous therapy to treat cancer; satisfaction of regulatory and other requirements; actions of regulatory bodies and other governmental authorities; obtaining, maintaining and protecting intellectual property, our ability to enforce our patents against infringers and defend our patent portfolio against challenges from third parties, competition from others developing products for similar uses, our ability to manage operating expenses, and our ability to obtain additional funding to support our business activities and establish and maintain strategic business alliances and new business initiatives. In addition, any forward-looking statements represent our views only as of today and should not be relied upon as representing our views as of any subsequent date. We explicitly disclaim any obligation to update any forward-looking statements.

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