



ASX ANNOUNCEMENT

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Positive Preliminary Data from Preclinical Heart Attack Study with Cynata's MSCs

- Preliminary results suggest that Cynata's unique Cymerus™ iPSC-generated MSCs may have potential to restore cardiac function and reduce scar size after a heart attack

Melbourne, Australia; 2 February 2017: Australian stem cell and regenerative medicine company, Cynata Therapeutics Limited (ASX: CYP), announced today that it has received very encouraging initial data from a proof of concept study of its Cymerus™ mesenchymal stem cells (MSCs) in an experimental rat model of myocardial infarction (heart attack).

A heart attack is life-threatening event that occurs when a blood vessel supplying the heart itself is suddenly blocked completely, threatening to damage the heart muscle and its functions. In Australia alone, heart attacks claimed over 8,000 lives in 2014, equating to 24 deaths per day¹.

This study, which is being conducted under the leadership of Associate Professor James Chong at the Westmead Institute for Medical Research, Sydney, aims to determine the ability of Cymerus™ MSCs to repair the rat heart after a heart attack.

The preliminary phase of the study involved assessment of cardiac function and scar size over a 28 day period after a heart attack was induced in a total of 11 rats. Four animals were treated with Cymerus™ MSCs, three were treated with bone marrow-derived MSCs and a further four received a placebo control. The initial results show that cardiac function was improved and scar size was reduced in the Cymerus™ MSC recipients at Day 28 compared to animals in both other groups.

Associate Professor Chong, who is also a cardiologist at Westmead Hospital and research group leader at the University of Sydney, said "this was a pilot phase of the study in a small number of animals, but the initial results are promising. We now plan to continue our studies, using larger numbers of animals and additional assessments to strengthen our initial findings. We will also investigate the effect of the treatment on ventricular arrhythmia, which is a potentially fatal abnormal heart rhythm that often develops after a heart attack".

"If these initial findings are confirmed during the remainder of the study, it would support the hypothesis that Cymerus™ MSCs could cause a substantial functional and structural improvement after a heart attack", said Cynata Vice President of Product Development, Dr Kilian Kelly. "We are delighted to be working with Associate Professor Chong on this project, and we look forward to continuing this collaboration", added Dr Kelly.

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About Cynata Therapeutics (ASX: CYP)

Cynata Therapeutics Limited (ASX: CYP) is an Australian stem cell and regenerative medicine company that is developing a therapeutic stem cell platform technology, Cymerus™, originating from the University of Wisconsin-Madison, a world leader in stem cell research. The proprietary Cymerus™ technology addresses a critical shortcoming in existing methods of production of mesenchymal stem cells (MSCs) for therapeutic use, which is the ability to achieve economic manufacture at commercial scale. Cymerus™ utilises induced pluripotent stem cells (iPSCs) to produce a particular type of MSC precursor, called a mesenchymoangioblast (MCA). The Cymerus™ platform provides a source of MSCs that is independent of donor limitations and provides an “off-the-shelf” stem cell platform for therapeutic product use, with a pharmaceutical product business model and economies of scale. This has the potential to create a new standard in the emergent arena of stem cell therapeutics and provides both a unique differentiator and an important competitive position.

1 https://heartfoundation.org.au/images/uploads/publications/Heart_attack-Factsheet_2016.pdf

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