ASX ANNOUNCEMENT 29 August 2022

Preclinical Study Showing Optimisation of Cymerus™ MSCs for Coronary Artery Disease Published in Leading Peer-Reviewed Journal

Melbourne, Australia; 29 August 2022: Cynata Therapeutics Limited (ASX: **"CYP"**, **"Cynata"**, or the **"Company"**), a clinical-stage biotechnology company specialising in cell therapeutics, has today announced that a paper describing the optimisation of Cymerus™ mesenchymal stem cells (MSCs) for the treatment of coronary artery disease (CAD) has been published in the highly respected peer-reviewed *Journal of Tissue Engineering and Regenerative Medicine*.

The newly published results arise from Cynata's collaboration with UNSW Sydney (the University of New South Wales). The studies were led by A/Prof Kristopher Kilian, Scientia Associate Professor at the School of Chemistry and the School of Materials Science & Engineering in the UNSW Faculty of Science.

The therapeutic effects of MSCs in CAD are believed to result from secretion of bioactive molecules that stimulate the formation of new blood vessels (angiogenesis) and modulation of the immune system. A/Prof Kilian's studies demonstrated that modification of the cell culture matrix (the material on which the cells are grown) "primes" Cymerus MSCs and enhances their pro-angiogenic and immunomodulatory properties.

These effects are expected to improve the therapeutic potential of Cymerus MSCs in the treatment of CAD and related conditions, as demonstrated by the fact that the primed cells led to an increase in the formation of new blood vessels *in vitro* and *in vivo*. Importantly, it was shown that the priming effects were maintained after the cells were cryopreserved (frozen), which would make it possible to store large batches of primed cells for clinical use.

A/Prof Kristopher Kilian, the study's Principal Investigator, said:

"There has been a lot of interest in cell-based therapies to treat CAD over the past twenty years, but clinical efficacy has often been disappointing, due to inconsistences in MSC isolation, reproducibility, and lack of insight into mechanisms of action. We believe there is potential to address these issues by coupling the consistent, large scale manufacturing capabilities of the Cymerus platform with the precise cell culture conditions that we have identified to optimise the MSCs' therapeutic effects in CAD."

Dr Kilian Kelly, Cynata's Chief Operating Officer, said:

"CAD is a major cause of illness and death. It affects more than half a million people in Australia alone, and in 2020 it was the single largest cause of death.[1] These exciting results suggest that Cymerus MSCs could play an important part in the management of CAD, especially in light of the previously announced findings from another preclinical study, which showed that Cymerus MSCs improve cardiac function and blood vessel formation after heart attack, as announced to the ASX on 28 September 2021."

The paper has been published online on the journal's website, and will appear in a print edition in the near future. The details of the paper are as follows: *Romanazzo S, Kopecky C, Jiang S, Doshi R, Mukund V, Srivastava P, Rnjak-Kovacina J, Kelly K, Kilian KA. Biomaterials directed activation of a cryostable therapeutic secretome in induced pluripotent stem cell derived mesenchymal stromal cells. J Tissue Eng Regen Med. 2022.*

[1] Heart, stroke and vascular disease—Australian facts. Australian Institute of Health and Welfare, September 2021.

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Authorised for release by Dr Ross Macdonald, Managing Director & CEO

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About Cynata Therapeutics (ASX: CYP)
Cynata Therapeutics Limited (ASX: CYP) is an Australian clinical-stage stem cell and regenerative medicine company focused on the development of therapies based on Cymerus™, a proprietary therapeutic stem cell platform technology. Cymerus™ overcomes the challenges of other production methods by using induced pluripotent stem cells (iPSCs) and a precursor cell known as mesenchymoangioblast (MCA) to achieve economic manufacture of cell therapy products, including mesenchymal stem cells (MSCs), at commercial scale without the limitation of multiple donors.

Cynata's lead product candidate CYP-001 met all clinical endpoints and demonstrated positive safety and efficacy data for the treatment of steroid-resistant acute graft-versus-host disease (GvHD) in a Phase 1 trial. Planning for a Phase 2 clinical trial in GvHD under a cleared US FDA IND is presently underway. Clinical trials of Cymerus products in osteoarthritis (Phase 3) and diabetic foot ulcers (DFU) are currently ongoing. In addition, Cynata has demonstrated utility of its Cymerus technology in preclinical models of numerous diseases, including the clinical targets mentioned above, as well as critical limb ischaemia, acute respiratory distress, idiopathic pulmonary fibrosis, asthma, heart attack, sepsis, acute respiratory distress syndrome (ARDS) and cytokine release syndrome.

Cynata Therapeutics encourages all current investors to go paperless by registering their details with the designated registry service provider, Automic Group.