

# A Next Generation Stem Cell Therapeutics Company

**AGM Presentation** 22 November 2022



# **Key Highlights: FY22**

### **Clinical & Pre-clinical**











Progress toward partnering clinical pipeline opportunities









- 1. aGvHD: Acute Graft vs Host Disease
- 2. Post FY22 event, LUMC: Leiden University Medical Centre
- 3. IPF: idiopathic pulmonary fibrosis

# **Key Highlights: FY22**

### **Commercial & Corporate**



Signed a Strategic
Partnership
Agreement (SPA) and
Manufacturing
Services Agreement
with Fujifilm: tech
transfer advancing
well



Regained
development and
commercialisation
rights to CYP-001 for
GvHD



Received payment of US\$5m as part of the SPA



Strengthened IP portfolio, with patents granted in the US, Canada, Russia, China and Japan



Dr Jolanta Airey appointed as Chief Medical Officer to drive Cynata's advanced clinical product pipeline



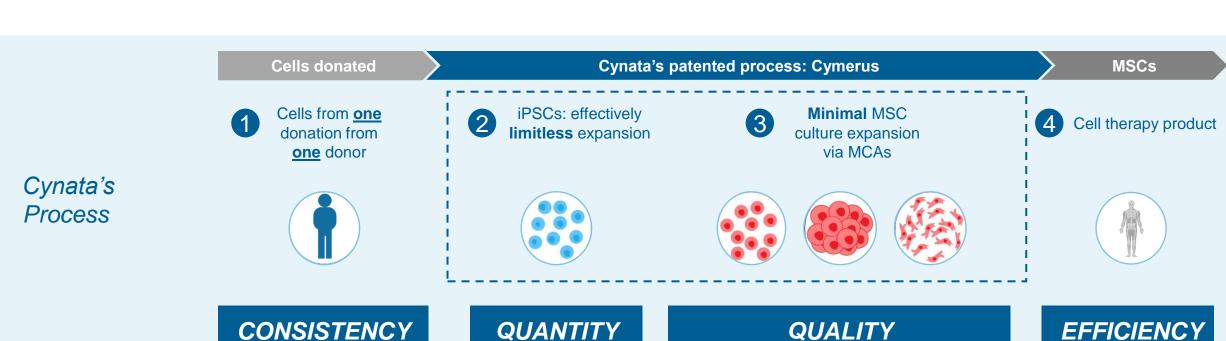
# Conventional vs. Cynata's Cymerus MSC manufacturing process

Cells from multiple donors

2 Limited quantity of MSCs isolated

3 Significant MSC expansion required

4 Cell therapy product





Conventional

**Processes** 

# Competitive strengths of the Cymerus platform

Cymerus technology elegantly addresses each of the major challenges faced by existing approaches to manufacturing MSCs, facilitating scalable and reproducible production at low cost



### **Conventional manufacture**



**Potency** 

Mandatory requirement to expand MSCs isolated from donors causes a **dramatic reduction in potency** while compromising scalability



Consistency

Reliance on multiple donors and donations compromises product consistency while posing logistical, practical and regulatory challenges



**Cost of treatment** 

Need for multiple/higher doses of product results in **high COGS** 



**Cymerus platform** 



Expansion at the iPSC stage ensures fresh, highly potent MSCs following final differentiation step



Same starting material for every batch



CYP-001 required **substantially lower number of doses** in aGvHD



## Cynata's technology addresses FDA concerns

Cynata's Cymerus process actively addresses current inefficiencies of MSC manufacturing, de-risking clinical development in the US

### Traditional MSC manufacturing is sub-optimal

Other MSC therapy (also targeting GvHD) was not approved by the FDA due to substantial functional variability between lots.

"Substantial functional heterogeneity has been observed between MSC batches derived from different donors and expanded using different tissue culture conditions or duration, even though all of these batches meet the ISCT criteria for MSCs."

- Excerpt from **FDA ODAC Briefing** document for 13 August 2020

### Cynata's technology is optimal



Consistency: No inter-donor variability as only one donor is required (single blood donation)



Scalability: Cynata can produce essentially limitless quantities of MSCs from initial donation



Potency: iPSC-derived manufacturing process does not require excessive culture expansion of MSCs

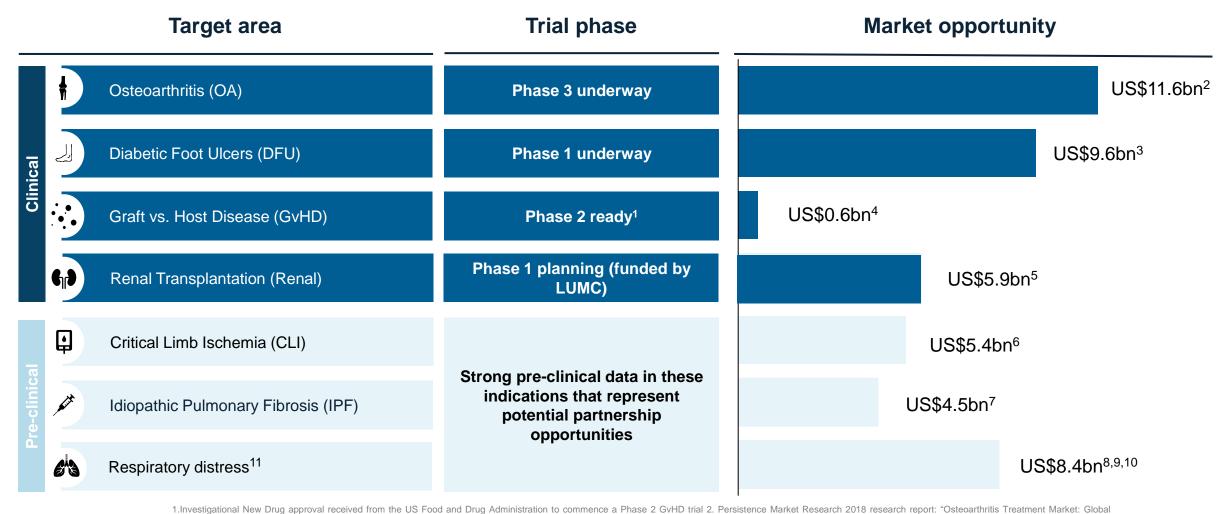


FDA advisory meeting observations to be leveraged to maximise chance of FDA approval



# Cynata has an advanced and diverse product pipeline

Cynata is targeting attractive market opportunities across a range of indications





Industry Analysis (2012-2016) and Forecast (2017-2025) (Reflect OA market by 2025); 3. Zion Market Research, 2019 (represents global treatment market in 2025); 4. Global Graft versus Host Disease Market 2019-2029 (Reflects forecast market in 2026); 5. Organ Transplant Immunosuppressant Drugs Market in 2026, Grand View Research, Inc., 2019; 6. Transparency Market Research, 2020 (Reflect global DFU treatment market by 2027). 7. iHealthcareAnalyst Inc, 2019 (represents global market by 2025); 8. Vasomune Therapeutics company announcement, 2018 (Reflects ARDS global market opportunity of US\$2.5bn) 9. GlobeNewswire, 2020 (Represents CRS global market opportunity of US\$5.9bn in 2017) 10. GlobalData 2017 (Reflects Sepsis global market opportunity of US\$5.9bn in 2026) 11. MEND clinical trial concluded following strategic review of clinical pipeline as announced 12 August 2022

## **GvHD | Ground-breaking Phase 1 clinical trial results**

Cynata's phase 1 GvHD trial met all safety and efficacy endpoints and broke ground by being the world's first completed clinical trial of an allogeneic iPSC-derived product

Key results<sup>1</sup> demonstrate safety and efficacy of Cymerus MSCs

Published in prestigious journal<sup>2</sup>

All endpoints achieved (Day 100) Complete response



Overall response



Survival rate



Efficacy endpoints were the same required in a phase 3 trial

Response rates were higher than what we expect would be required in phase 3 (to support marketing approval)

Outstanding follow-up results (Two year)

Overall survival rate: Cynata MSCs



Compares favourably with other results

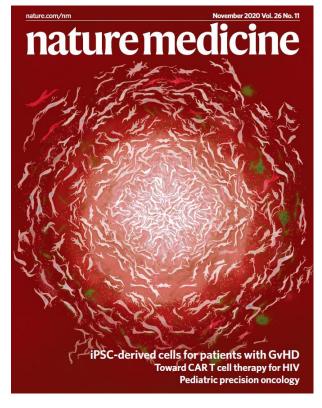


Standard of care



Other MSC products

Nature medicine is the preeminent peerreviewed medical journal worldwide





## aGvHD | Phase 2 clinical trial in aGvHD

With a cleared IND from the FDA Cynata expects to commence a clinical trial in acute GvHD by early 2023



aGvHD

Acute Graft vs Host Disease (aGvHD) remains a common complication
of allogeneic hematopoietic stem cell transplants (e.g., bone marrow
transplants) when the donor's immune cells (from the "graft") attack the
recipient of the transplant (the "host").



Unmet medical need

- The only first line treatment is corticosteroids, which is only effective in ~50% of patients
- Patients who fail current treatments face mortality rates in excess of 90%



Validated by Phase 1 results

 Cynata's phase 1 GvHD trial met all safety and efficacy endpoints and broke ground by being the world's first completed clinical trial of an allogeneic iPSC-derived product



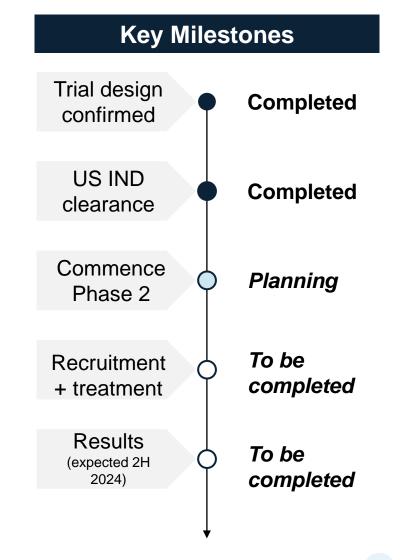
US FDA approval

 US Food and Drug Administration (FDA) has cleared Cynata's Investigational New Drug (IND) application for a phase 2 clinical trial of CYP-001 in aGvHD



Trial design

- Proposed trial will seek to recruit ~60 patients with high risk aGvHD at clinical centres in a number of countries, including US and Australia
- Final start-up activities underway in concert with CRO IQVIA





## **DFU | Phase 1 clinical trial update**

Enrolment opened in December 2021 with completion expected in 1H23



# Diabetic Foot Ulcers (DFU)

 DFU are sores on the feet of patients with diabetes (also known as diabetic wounds)



Huge Market Opportunity

- >400m diabetics globally, with DFU estimated to occur in ~15-25% of patients during their lifetime<sup>1</sup>
- Global market is estimated to be ~US\$10bn<sup>2</sup>



Strong preclinical data

- · Positive efficacy data of MSCs in a preclinical model
- Cymerus MSCs achieved 86% skin restoration after three days



Unique competitive positioning

- Secured a worldwide exclusive licence agreement with TekCyte to a novel polymer-coated dressing technology to deliver MSCs topically
- CYP-006TK: polymer-coated silicon dressing seeded with Cymerus MSCs



**Trial design** 

• 30 patients with DFU will be randomly assigned to receive CYP-006TK or standard care of treatment, over 4 weeks



Timing update

 Recruitment expected to finish by mid way through 2023 with results released by the end of 2023





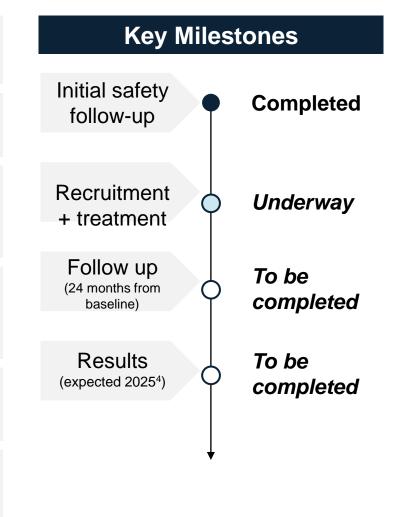
Diabetics Australia (estimated ~415m adults with diabetes in 2015); Mutluoglu M, Uzun G, Turhan V, Gorenek L, Ay H, Lipsky BA. How reliable are cultures of specimens from superficial swabs compared with those of deep tissue in patients with diabetic foot ulcers? J Diabetes Complications. 2012 May-Jun;26(3):225-9

<sup>2.</sup> Estimated DFU market (Source: Transparency Market Research, 2020 (Reflects global DFU treatment market by 2027)).

# Osteoarthritis-SCUIpTOR<sup>1</sup> | Phase 3 clinical trial update

Clinical trial underway, sponsored by the University of Sydney and funded by an NHMRC project grant







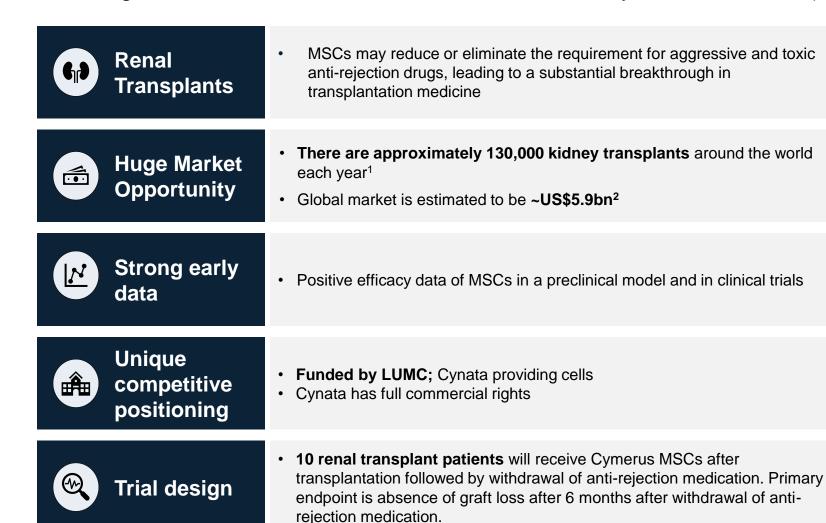
update

- . Clinical trial entitled Stem Cells as a symptom and strUcture-modifying Treatment for medial tibiofemoral OsteoaRthritis: a randomised placebo-controlled trial (SCUIpTOR)
- 2. Reflects OA market by 2025; Persistence Market Research 2018 research report: "Osteoarthritis Treatment Market: Global Industry Analysis (2012-2016) and Forecast (2017-2025).
- 3. NHMRC: National Health and Medical Research Council
- Note: Timing is dependent on a number of external factors (including COVID-19 restrictions)

of Sydney based on the current recruitment rate

## Renal | Phase 1 clinical trial update

Funding to conduct trial secured from Leiden University Medical Center (LUMC)







- . https://www.statista.com/statistics/398645/global-estimation-of-organ-transplantations/
- 2. Organ Transplant Immunosuppressant Drugs Market in 2026, Grand View Research, Inc.,2019.

# **Near term catalysts**

Cynata is in a strong position to advance its proprietary Cymerus platform technology

### End 2022 + 1H 2023

- ✓ DSMB review in DFU trial
- ☐ Commence phase 2 trial in aGvHD
- ☐ Complete recruitment of 30 patients in DFU clinical trial

### **During 2H 2023**

- ☐ Complete recruitment of 440 patients in U Syd phase 3 osteoarthritis trial
- ☐ Announce DFU clinical trial results
- ☐ Commence renal transplant clinical trial with LUMC

### **Ongoing**

- ☐ Further clinical trial results: expecting ongoing newsflow as our clinical pipeline matures and our broad pre-clinical pipeline enters clinical trials
- ☐ Progress commercial discussions and execute further corporate partnership(s)





## **Board & management**

Highly skilled and experienced senior leadership team with decades of experience



**Dr Geoff Brooke** Chairman

- · 30+ years experience in the healthcare investment industry
- Founder and MD of Medvest Inc and GBS Venture Partners



**Dr Ross Macdonald**Managing Director / CEO

- 30+ years experience and a track record of success in pharmaceutical and biotechnology businesses
- Previously CEO of Hatchtech



**Dr Kilian Kelly**Chief Operating Officer

- 15+ years experience in biopharma research & development
- Previously Senior Director, Drug Development at Biota Pharmaceuticals, VP, Regulatory and Clinical at Mesoblast



**Dr Jolanta Airey** Chief Medical Officer

- 25+ years experience in respiratory, rheumatology, dermatology, biologicals and listed companies
- Previously Director, Translational Development at CSL



Ms Janine Rolfe, GAICD Non-Exec Director

- 20+ years legal, governance and management experience across multiple sectors
- Founder of Company Matters



**Dr Paul Wotton**Non-Exec Director

- 30+ years experience in senior positions of life sciences companies
- Previously **President and CEO** of Ocata Therapeutics, Inc.



**Dr Stewart Washer** Non-Exec Director

- 20+ years of CEO and Board experience
- Chairman of Orthocell (ASX:OCC) and Emyria (ASX:EMD), Director of Botanix Pharmaceuticals (ASX:BOT).



**Dr Darryl Maher** Non-Exec Director

- · Vice President of R&D and Medical Affairs at CSL Behring
- He was a **former President** of the Australian Pharmaceutical Physicians Association and a director of Vaccine Solutions



**Mr Peter Webse**Company Secretary

- 23+ years company secretarial experience
- MD of Platinum Corporate Secretariat Pty Ltd, providing company secretarial and other services



## **Investment Highlights**

Cynata is a clinical stage biotech developing its proprietary Cymerus™ platform technology for the scalable manufacture of mesenchymal stem cell (MSC) therapeutic products to treat serious disorders



Single donation from a single donor overcomes

overcomes suboptimalities in conventional MSC manufacturing



Positive pre-clinical and clinical data

supporting versatility and efficacy of Cynata's MSCs

**Validation** through strategic partnership with FUJIFILM



Rich clinical pipeline:

- Diabetic Foot Ulcers
- Osteoarthritis (phase 3)
- Renal transplantation to commence in 2023<sup>1</sup>
- Phase 2 aGvHD trial to commence in 2023<sup>1</sup> under cleared IND



Combined market opportunity of clinical trials underway and in planning is ~A\$38bn



Multiple pathways to commercialisation, including strategic partnering



### **Important information**

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