Chimeric Therapeutics - Entitlement Offer to Finance Pipeline to CY 2023 and Beyond Phase 1A GBM Data

Share Price: A$0.14 | Valuation: A$0.94

Chimeric Therapeutics (ASX:CHM)

Key Statistics

52 Week Range	A$0.14-A$0.37
Avg. Volume (3 months)	729.93K
Shares Outstanding	348.19M
Market Capitalization	A$50.34M
EV/Revenue	n/a
Cash Balance*	A$13.4
Analyst Coverage	4

***Cash balance as December 31**

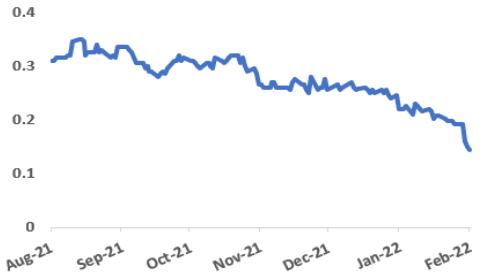
Revenue (in $mm)

Dec - FY	2020A	2021E	2022E
FY	-	-	-

EPS

Dec – FY	2020A	2021E	2022E
FY	(0.08)	(0.07)	(0.07)

Stock Price Chart



Investment Highlights

- **Chimeric Entitlement Offer Targets Approximately $18.1 Million Additional Capital** – Chimeric is targeting a capital raise of $18.1 million (excluding offering expenses), the offer price of A$0.17 is a discount of 15% to the last trading price of shares and an 18.3% discount to 5-day volume weighted average price. The Entitlement Offer consists of both an institutional and retail component, with the offering managed by Bell Potter Securities Limited, with additional details accessible in the filing and press release. The offering provides for eligible shareholders to subscribe for 1 new ordinary share for each 3.15 existing share. Additionally, for each share issued an option will be issued with an exercise price of A$0.255 with an expiration date of March 31, 2024 (subject to change).

- **Capital Provides Longer Runway to Data Readout** – Given the overall volatility in the capital markets recently, having capital to reach data readouts in early-stage biotechnology is critical. The proceeds from the entitlement offering are anticipated to fund payments under the company's license and sponsored research agreements, in addition to the phase 1 clinical trials. Proceeds from the offering will also be used for working capital and to pay respective costs of the offering. While this offering if successful, would result in additional shares issued, we believe the most important aspect at this stage of development is reaching key data readouts and advancing the overall pipeline, which this capital would facilitate.

- **Recent Financials in Line with Expectations** - Chimeric Therapeutics reported spending of roughly A$2 million less than anticipated in the IPO prospectus. Research and Development expenditures were roughly 50% less than expected, largely related to delays in bringing on staff during the pandemic. Chimeric Therapeutics recently reported interim phase 1 trial results for its rGBM immunotherapy. The trial results showed promising safety data and a disease control rate of 75% in 3 out of 4 patients treated. There was no dose-limiting toxicity aside from one subject patient who developed cerebral edema. The initial trial results confirm the correlation between the MMP-2 marker and CLTX binding supporting the rationale to explore MMP-2 as a corrective marker. We see this early-stage data as encouraging as the company progresses further with its phase 1 trial using higher dose levels and dual-routes of administration. Chimeric Therapeutics will extend its existing pipeline of antigen receptors (CLTX AND CDH17) based immunotherapies towards NK cells. CAR allows the engineering of NK cells providing specificity to target the intended cells. The company is expected to leverage the clinically validated NK cell platform to develop CLTX CAR-NK, CDH17 CAR-NK, CHM 3301 (target undisclosed) and CHM 0301 a next generation CORE-NK platform (targeting blood cancer combination therapies).

Company Description

Chimeric Therapeutics is an Australian clinical-stage cell therapy company established in 2020. The company researches and develops innovative and promising cell therapies that they believe can cure cancer and not just delay disease progression

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Key dates[4]

Event	Date
Trading halt	21 February 2022
Announcement of the Entitlement Offer	21 February 2022
Announcement of results of Institutional Entitlement Offer	23 February 2022
Record Date for Retail Entitlement Offer (7.00pm, Sydney time)	23 February 2022
Settlement of the Institutional Entitlement Offer	28 February 2022
Prospectus and Entitlement and Acceptance Form despatched to Eligible Retail Shareholders	28 February 2022
Retail Entitlement Offer opens	28 February 2022
Allotment of New Shares under the Institutional Entitlement Offer	1 March 2022
Quotation of New Shares under the Institutional Entitlement Offer	1 March 2022

[4]All dates are indicative only and subject to change. Chimeric reserves the right to withdraw or vary the timetable without notice.

Event	Date
Retail Entitlement Offer closes (5.00pm, Sydney time)	11 March 2022
Announcement of results of Retail Entitlement Offer and under-subscriptions	16 March 2022
Allotment of New Shares and New Options issued under the Retail Entitlement Offer	18 March 2022
Allotment of New Options under the Institutional Offer	18 March 2022
Despatch of holding statements for New Shares and New Options issued under the Retail Entitlement Offer, and New Options issued under the Institutional Offer	21 March 2022
Normal ASX trading for New Shares and New Options issued under the Retail Entitlement Offer, and New Options under the Institutional Offer, commences	21 March 2022

Exhibit 1: Chimeric Therapeutics Press Release[1]

[1] Ojo, E.O., Sharma, A.A., Liu, R. *et al.* Membrane bound IL-21 based NK cell feeder cells drive robust expansion and metabolic activation of NK cells. *Sci Rep* **9,** 14916 (2019). https://doi.org/10.1038/s41598-019-51287-6

CORE-NK platform – Expansive Platform Technology

Chimeric therapeutics expands pipeline with a platform technology

Immunotherapy holds a lot of promise in treating and curing cancer. The company believes in that vision and has decided to expand its T-cell immunotherapy portfolio with a new addition of a recently licensed NK platform. Natural Killer (NK) cells are an integral part of a human's innate immune system and are part of the first line of defense against foreign bodies and pathogens. These cells show spontaneous cytolytic activity against cells under stress and tumor-infected cells. Their natural ability to eliminate tumor cells has led to NK-based cell therapies being studied aside from T-cell-based therapies. The established safety profiles in the early clinical trials and fast-acting ability have led to an emerging effort for developing "off the shelf" NK-based cell immunotherapy. While there are challenges to such a setting that includes difficulty to meet clinical-grade ex-vivo expansion, limited ability to infiltrate solid tumors, and NK cells not being naturally abundant and robust enough to fight cancer as it grows. Chimeric Therapeutics believes that despite its limitations, NK-based cell therapy holds a lot of promise and has thus obtained an exclusive option to license **C**linically validated, **O**ff the shelf, **R**obust, **E**nhanced **N**atural **K**iller cell platform (CORE-NK platform) developed at Case Western Reserve University (CWRU). The platform is designed and developed by Dr. David Wald, who is a leading expert in immuno-oncology at CWRU, which leverages the natural anti-cancer properties of naked natural killer cells that provides an optimal foundation for the development of next-generation CAR NK therapies.

Natural Killer Cells innate ability to identify and kill and tumor cells

The core NK platform uses membrane-bound IL-21 based NK cell feeder cells lines to activate and expand the healthy donor naked natural killer cells to make them more active and robust to combat cancer as it grows. Interleukins (IL) are a type of cytokine which helps to modulate growth, differentiation, and activation during inflammatory and immune responses. IL-21 is one of the several interleukins, which acts on various immune cells of the innate and the adaptive immune system that helps in enhancing NK cell activity. Using membrane-bound IL-21 ensures robust and sustained proliferation of highly cytotoxic NK cells. The expanded NK cells exhibit increased cytotoxic function against a panel of blood cancer and solid tumor cells compared to IL-2-activated non-expanded NK cells[2]. Recent clinical trials suggest that high dosages of NK cells ($>10^9$/kg) are safe and efficient. Unlike T-cells, another major potential advantage of NK cell-based therapy is that it can be carried out as off-the-shelf therapy and supports single donor expansion to treat multiple patients.

NK cell-based therapies could have various advantages over T-cell therapies

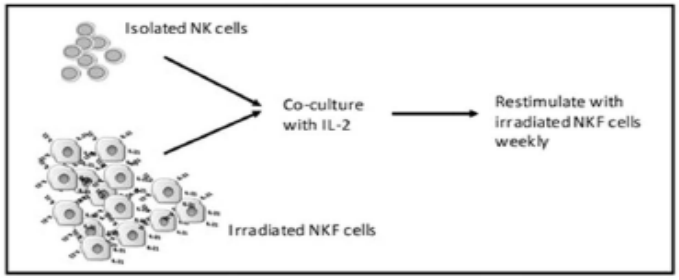

Exhibit 2: Schema of the NKF based NK cell expansion platform[3]

[2]Ojo, E.O., Sharma, A.A., Liu, R. *et al.* Membrane bound IL-21 based NK cell feeder cells drive robust expansion and metabolic activation of NK cells. *Sci Rep* **9,** 14916 (2019). https://doi.org/10.1038/s41598-019-51287-6

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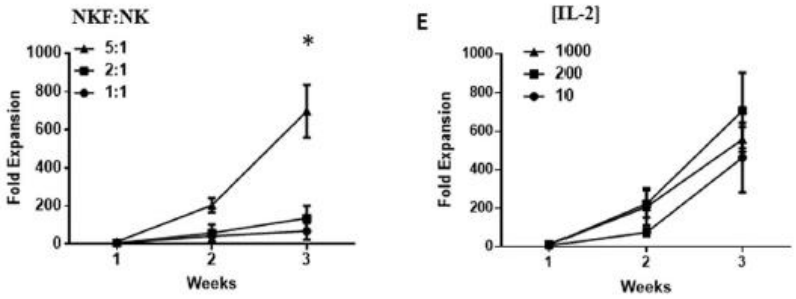

Exhibit 3: Fold expansion of NK cells at the indicated NKF: NK ratios and 200U/ml IL-2 after three weeks, n = 4[4]

Preclinical trial results indicated decreased growth of tumor cells and improvement in survival rate

Pre-Clinical Efficacy and Safety Profile

The NKF-NK cells developed through the CORE-NK platform were first tested on mouse models of sarcoma and lymphoid leukemia. The sarcoma model was used as it leads to metastasis to the lungs, the most common site for sarcoma metastasis in humans and a known site for NK-cell trafficking in vivo[5]. The initial results were encouraging pertaining to the sarcoma model as not only reduction in the growth of sarcoma tumor was observed with NKF-NK cell administration but also a reduction in tumor metastasis to lungs was also observed. In the case of highly aggressive lymphoid leukemia. NSG mice injected with NKF-NK cells showed decreased proliferation of tumor cells and a 13 days median increase in survival over control-treated mice.

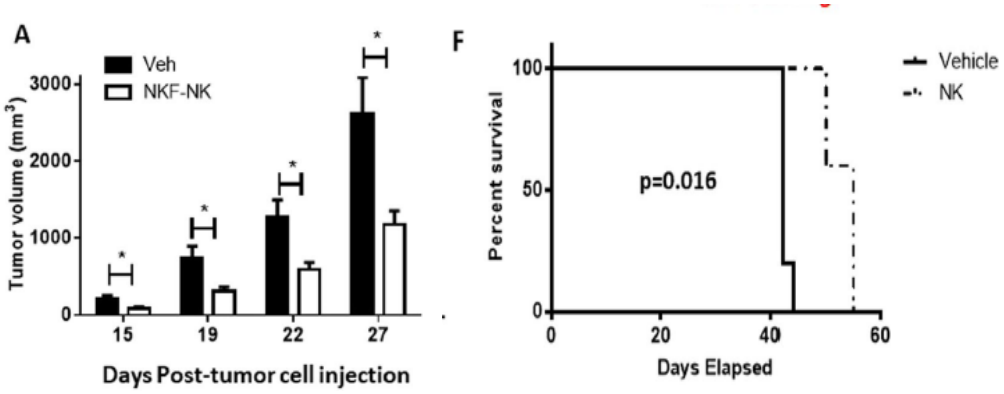

Exhibit 4: NKF-NK cells exhibit efficacy in a mouse sarcoma model[6]

The results from the preclinical trials (mouse models) were encouraging in terms of both efficacy and safety. The NKF-NK cell lines successfully exhibited potent cytotoxicity in blood cancer and solid tumors and reduced tumor burden in both primary and metastatic tumor sites. The university concluded the phase 1 trial in June 2021 involving subjects with both solid tumors and blood cancer. Initial results from the phase 1 trial results are expected in 2022. The trial results will provide early-stage validation for the development of next-generation CAR-NK products where the company's focus lies.

[4] Ojo, E.O., Sharma, A.A., Liu, R. *et al.* Membrane bound IL-21 based NK cell feeder cells drive robust expansion and metabolic activation of NK cells. *Sci Rep* **9,** 14916 (2019). https://doi.org/10.1038/s41598-019-51287-6

[5] Ojo, E.O., Sharma, A.A., Liu, R. *et al.* Membrane bound IL-21 based NK cell feeder cells drive robust expansion and metabolic activation of NK cells. *Sci Rep* **9,** 14916 (2019). https://doi.org/10.1038/s41598-019-51287-6

[6] Ojo, E.O., Sharma, A.A., Liu, R. *et al.* Membrane bound IL-21 based NK cell feeder cells drive robust expansion and metabolic activation of NK cells. *Sci Rep* **9,** 14916 (2019). https://doi.org/10.1038/s41598-019-51287-6

From Autologous to Allogeneic - Creating a Strong Pipeline of NextGen Cell Therapy

With the addition of the CORE-NK platform, Chimeric Therapeutics has the potential to offer a complete range of therapies from Autologous (personalized) to Allogenic (off the shelf). The company's major focus is on integrating Chimeric Antigen Receptors (CAR) with NK cells which enhances the recognition of specific antigens on tumor cells, allowing targeted destruction of cancerous cells. Chimeric Therapeutics, in collaboration with Dr. David Wald at CWRU, will begin the research collaboration to further engineer the CORE-NK platform by using the company's current pipeline of chimeric antigen receptors (CLTX and CDH17). The five new therapies that the company is adding to its pipeline include CLTX CAR-NK, CDH17 CAR-NK, an undisclosed CAR-NK, the CORE-NK platform (phase 1 trial completed), and a next generation CORE-NK platform targeting combination therapies for Acute Myeloid Leukemia, Multiple Melanoma and B Cell Malignancies. This takes the company's total to seven novel cell therapies utilizing NK cells and T-cells. Combining the CORE-NK platform with that of Chimeric Antigen Receptors (CARs) enhances the platform leading to the targeted killing of tumor cells. CAR-NK cell therapy hold a lot of promise, due to its large-scale clinical use. Various preclinical research has shown that NK cells can be effectively engineered to express extensive cytotoxic activity against hematological and solid tumors. Chimeric Therapeutics has built an innovative cell therapy pipeline and strengthened its positioning as Australia's leading cell therapy player. The company is expected to completely license the NK platform from CWRU in return for the development milestones and industry-standard royalty rates based on net sales.[7]

Currently, 19 trials investigating CAR-NK cells for the treatment of hematological malignancies and the treatment of solid tumors are underway. Most of the CAR-NK cell trials are conducted in China (15 trials), while three trials are ongoing in the US, and only one trial is performed in Europe (Germany). In addition, a few trials are currently addressing CAR-NK/T cell products (2 trials in the US and one trial in China) as well as CAR-modified cytokine-induced killer cells (1 trial in Italy).[8]

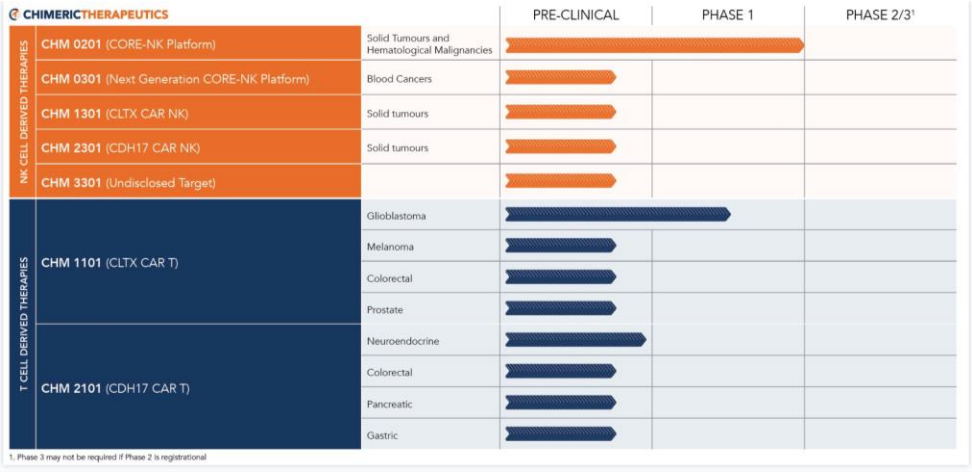

Exhibit 5: Chimeric Therapeutics Investment Presentation

[7] CAR-engineered NK cells; a promising therapeutic option for treatment of hematological malignancies. Stem Cell Research & Therapy. 12. 10.1186/s13287-021-02462-y.
[8] Albinger, N., Hartmann, J. & Ullrich, E. Current status and perspective of CAR-T and CAR-NK cell therapy trials in Germany. *Gene Ther* **28,** 513–527 (2021). https://doi.org/10.1038/s41434-021-00246-w

The Target Market

Chimeric's and CWRU's focus is on treating various solid tumors, including various forms of blood cancers. Blood cancer starts as rapid and out of control growth of abnormal cells in blood-forming tissue, including the bone marrow. There are various kinds of blood cancers, but Acute Lymphocytic Leukemia (ALL), Chronic Lymphocytic Leukemia (CLL), non-Hodgkin lymphoma, and multiple myeloma are the most common forms of blood cancer. An estimated 186,400 cases of blood cancer are expected to be diagnosed in the US. The 5-year survival rate for all types of leukemia is 65%, while it is the 11th leading cause of cancer-related mortality worldwide. The standard of care for leukemia is Chemotherapy and radiation therapy, but in the past decade, various immunotherapies, including CAR-T cell therapies, have been FDA approved to treat some lymphomas, leukemias, and multiple myeloma.

Solid tumors targeted by the CORE-NK platform in initial Case Western Reserve University trials include colorectal cancer, Ewing sarcoma, and soft tissue sarcoma. Sarcoma occurs in bones and other soft tissues of the body, including cartilage, muscle, fibrous tissue, or other connective or supportive tissue. Soft tissue sarcomas are by far the most common form of sarcomas, while malignant bone tumors account for 10% of all sarcomas. Sarcomas as a whole is a rare disease accounting for just 1% of all adult solid malignant tumors. About 13,460 new cases of soft tissue sarcomas and 149,500 cases of colorectal cancer will be diagnosed in the US in 2021. The 5-year relative survival rate of soft tissue sarcoma and colorectal cancer is 65%, while it varies from 15% to 80% for distant stages to localized forms of cancer, respectively. Colorectal cancer that has not spread to distant sites and small-low grade sarcomas may be removed through surgery. In contrast, the high-grade sarcomas and stage 0 and stage I colorectal cancer are treated through a combination of chemotherapy, radiation therapy, and surgery. Aside from the standard therapies, three FDA-approved immunotherapies are used to treat sarcoma, while many more are being investigated in a clinical trial. Immunomodulators, including Dostralimab, Pembrolizumab, and Denosumab as targeted antibodies, are the FDA-approved immunotherapies.

Chimeric Reports Encouraging Interim Phase 1 Trial Data for its rGBM Indication

The CLTX CAR-T cell therapy provided encouraging insights into the safety data in the early stage of the phase 1 trial. The therapy was well tolerated with no dose-limiting toxicities among the four patients enrolled in dose level 1 of the trial. A disease control rate of 75% was observed in three out of four patients exhibiting the best response of stable disease at the lowest dose level of $44x10^6$ CLTX CAR-T cells. The cell dosage was also well-tolerated, and none of the patients experienced dose-limiting toxicity aside from one subject who experienced grade 3 cerebral edema. The bioactivity of the cells was also persistent throughout treatment, indicating that the CLTX CAR T cells are not immunogenic. The company is expected to progress the trial with plans to expand to a multi-site trial in 2021. Dosage is expected to increase from the current $44x10^6$ to $440x10^6$.

Risk Factors

1) **Dependence upon License Agreements**
   Chimeric has entered into a license agreement with City of Hope for its CLTX CAR-T technology, thus its business is in part dictated and dependent on the terms and conditions agreed upon by both parties. Any non-compliance with the terms of this agreement can have an adverse impact on Chimeric's business.

2) **Pipeline Product in Development and not approved for commercial sale**
   Chimeric Therapeutics' oncology pipeline is still in its early phases of trials and further even if trials are successful there is no guarantee that the following commercialization will be successful.

3) **Arrangement with Third-Party Collaborators**
   The company may collaborate with other pharmaceutical and life sciences companies to complete its development and commercialization of products. Currently, it has a license agreement with City of Hope and similarly, Chimeric has also been granted worldwide exclusive rights to the novel 3rd generation CDH17 CAR-T Cell Therapy from the University of Pennsylvania, which has committed funding for the next 3 years.

4) **Competition from Ongoing Trials**
   The number of clinical trials has increased over the years with currently 5 FDA-approved CAR-T cell therapies for treating acute lymphoblastic leukemia, B-cell lymphoma, follicular lymphoma, mantle cell lymphoma, multiple myeloma, and 18 ongoing clinical trials that can put Chimeric in direct competition with the companies who have substantially greater resources than the company and may alter Chimeric's contemplated pricing and margins if its drugs are approved.

5) **Ability to raise capital**
   The company will likely be required to raise additional equity or debt capital in the future. There is no assurance a raise will be successful when required and/or at attractive terms.

These risk factors are not comprehensive. For a full list of risk factors, please read Chimeric Therapeutics' latest prospectus and/or annual filings

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