CLARITY
PHARMACEUTICALS

QUARTERLY ACTIVITY REPORT

SYDNEY, AUSTRALIA
31 OCTOBER 2022

HIGHLIGHTS OF THE QUARTER

Ending 30 September 2022

Cash position remains strong with a balance of $84.7 million as at 30 September 2022. Clarity's estimated R&D tax incentive claim for FY22 is approximately $6 million. Together with the current cash position, this provides an estimated $90 million to fund the existing trial pipeline and provide cash runway into 2024.

PROPELLER

Recruitment completed for Phase I diagnostic trial of ^{64}Cu SAR-bisPSMA in prostate cancer, with top-line results data expected by the end of CY2022, informing a registrational Phase III trial.

CL04

Cohort 2 completed recruitment in the theranostic neuroblastoma trial with ^{64}Cu/^{67}Cu SARTATE™ with no dose limiting toxicities; the trial is now recruiting into cohort 3 of the dose escalation phase as planned.

Data on the ^{64}Cu SAR-Bombesin

diagnostic product in PSMA-negative prostate cancer patients imaged at St Vincent's Hospital under the Therapeutic Goods Administration (TGA) Special Access Scheme (SAS) presented.

SABRE

US-based Phase II diagnostic prostate cancer trial with ^{64}Cu SAR-Bombesin opened for recruitment for patients with PSMA-negative prostate cancer in August 2022.

BOP

First participants recruited and imaged in a diagnostic investigator-initiated Phase II prostate cancer trial with ^{64}Cu SAR-Bombesin in September, shortly after trial commencement in August 2022 at St Vincent's Hospital Sydney, led by Prof Louise Emmett.

Enhancing US manufacturing with two additional agreements

with Evergreen Theragnostics and 3D Imaging. These agreements help to reinforce Clarity's supply chain in preparation for current and future clinical trials.

Patent application covering SAR-bisPSMA

granted in China, enhancing protection of this optimised product.

New Chief Scientific Officer (CSO), Dr Jeff Norenberg,

joined the Senior Executive Team with outgoing CSO, Dr Matt Harris, continuing to serve in a newly created role of Director of Technology.

Clarity Pharmaceuticals (ASX: CU6) ("Clarity" or the "Company"), a clinical stage radiopharmaceutical company with a mission to develop next-generation products that improve treatment outcomes for children and adults with cancer, is pleased to release its Quarterly Activity Report and Appendix 4C for the quarter ending 30 September 2022.

Executive Chairman Dr Alan Taylor said: "The first quarter of FY23 has been reflective of the accelerated pace with which we progress our Targeted Copper Theranostic (TCT) platform of products, achieving a number of important milestones in our new and existing trials.

"To ensure additional capacity and flexibility to supply products for our clinical programs, including planned Phase III trials and future commercialisation, Clarity continues to leverage the supply and manufacturing benefits associated with the perfect pairing of copper isotopes for imaging and therapy. Our TCT platform is underpinned by a strong and growing intellectual property position and an expanding team of global experts in the radiopharmaceutical field who are implementing our strategy to advance into the US markets for first approvals with our diagnostic and therapy platforms.

"Clarity remains well funded with a cash balance of $84.7 million or approximately $90 million when taking into consideration an estimated R&D tax incentive claim of approximately $6 million for FY22. This funding will support our existing clinical trials and Discovery Program, enabling us to bring our diagnostic products for imaging of prostate cancer into US based Phase III registrational trials in this large oncology indication with significant unmet clinical needs."

In the quarter ending 30 September 2022, Clarity made significant progress on developing its **SAR-Bombesin product**. The Company opened its US-based diagnostic Phase II ^{64}Cu SAR-Bombesin trial, SABRE (NCT05407311)[1], for recruitment shortly after receiving approval of its Investigational New Drug (IND) application by the US Food and Drug Administration (FDA) to evaluate the ^{64}Cu SAR-Bombesin product as an imaging agent in PSMA-negative prostate cancer patients.

In addition, Clarity's ongoing collaborator and Advisory Board member, Prof Louise Emmett, commenced and recruited first participants into an investigator-initiated trial (IIT) in prostate cancer patients with ^{64}Cu SAR-Bombesin (BOP) at St Vincent's Hospital Sydney. This follows on from initial data collected under the Therapeutic Goods Administration (TGA) Special Access Scheme (SAS)[2-3] with ^{64}Cu SAR-Bombesin in PSMA-negative prostate cancer patients imaged at St Vincent's Hospital, which was recently presented as a case study.

SAR-Bombesin holds promise to address a significant segment of prostate cancer patients whose cancer either does not express PSMA, or cannot be detected by currently approved short half-life PSMA diagnostic agents or conventional imaging, such as CT and MRI, or treated with currently approved PSMA-based therapy. The preliminary data also shows potential for SAR-Bombesin use in broader prostate cancer indications.

Clarity will continue the development of SAR-Bombesin as a stand-alone diagnostic while also exploring various patient populations for therapy. The Company plans to have an open IND with the US FDA for the theranostic trial by the end of the 2022 calendar year.

Another key clinical development milestone this quarter has been the completion of recruitment into Clarity's diagnostic prostate cancer **^{64}Cu SAR-bisPSMA trial, PROPELLER** (NCT04839367)[4] in July 2022. Top-line data, expected by the end of CY2022, will inform a registrational Phase III trial in patients with untreated, confirmed prostate cancer, scheduled for radical prostatectomy.

Clarity's **theranostic trial in neuroblastoma**, an aggressive childhood cancer, with **^{64}Cu/^{67}Cu SARTATE™**, CL04 (NCT04023331)[5], has progressed well during the reporting period. Cohort 2 was completed in August 2022 with no dose limiting toxicities. The Safety Review Committee recommended the trial continues with the dose escalation phase as planned and Clarity is preparing to treat its first paediatric patient in cohort 3 shortly. There are currently five US clinical sites open for recruitment and additional US sites are planned to open in the coming months.

Dependable and sustainable manufacturing processes and supply chain are vital for the expansion of Clarity's radiopharmaceuticals into the large oncology market and are at the core of the Company's strategy. As such, Clarity continued to strengthen its manufacturing efforts with two agreements entered into this quarter: an expansion of the existing agreement with Evergreen Theragnostics to include manufacturing and supply of therapeutic ^{67}Cu SAR-Bombesin for Clarity's upcoming theranostic trial in the US, as well as a supply agreement with 3D Imaging for ^{64}Cu and ^{64}Cu SAR-bisPSMA for diagnostic Phase III clinical trials. These agreements ensure additional product capacity and supply flexibility for Clarity's existing and upcoming clinical programs.

In addition to the progress achieved in the clinical development of Clarity's TCT platform, the Company also reinforced its **intellectual property (IP)** with the granting of the patent application covering SAR-bisPSMA in China. This enabled Clarity to enhance protection of SAR-bisPSMA which has progressed through several clinical trials in prostate cancer during the reporting period.

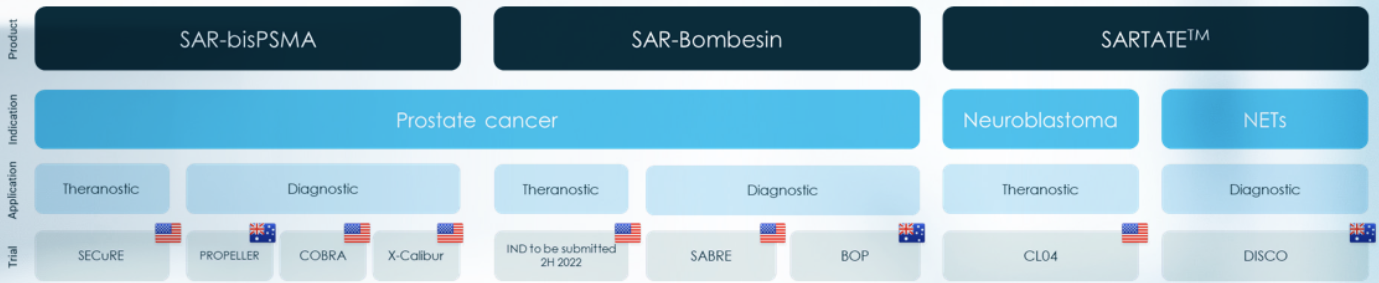
Clarity also continues to build its exceptional **team of employees, collaborators and advisors** to support the development of its TCT platform with a unique range of world-class skills and expertise. This quarter, Clarity welcomed a new Chief Scientific Officer, Dr Jeff Norenberg.

Dr Taylor said:

"Our outstanding progress in clinical, preclinical and regulatory development as well as our building of strong operations, IP and Discovery platform, is an outstanding achievement in the industry for a Company of Clarity's size, with less than 30 employees in the US and Australia. We celebrate these achievements and look forward to further growing our Company and its accomplishments, driven by our ultimate goal of developing next-generation radiopharmaceuticals to improve treatment outcomes for children and adults with cancer."

CLINICAL DEVELOPMENT OVERVIEW

Clarity's pipeline includes the following cancer indications, products and clinical trials:



Clarity continues to generate significant momentum in the clinical development of its products in the TCT platform. At September 30, 2022, the company was actively progressing six clinical trials of its three key products, SARTATE™, SAR-bisPSMA and SAR-Bombesin. The trials are conducted in two theranostic (therapeutic and diagnostic) and four diagnostic indications. In addition to these six trials, sponsored by Clarity, there are also two investigator-initiated trials (IITs) with Clarity's products.

SARTATE™

targets the Somatostatin Receptor 2 (SSTR2), which is present in an aggressive childhood cancer, neuroblastoma, as well as Neuroendocrine Tumours (NETs), among other cancers.

SAR-bisPSMA

targets the Prostate Specific Membrane Antigen (PSMA), present in the majority of prostate cancers.

SAR-Bombesin

targets the Gastrin Releasing Peptide receptor (GRPr), which is present in a number of cancers, including breast and prostate cancers.

CLINICAL DEVELOPMENT OVERVIEW

SARTATE™

Theranostic

- **CL04 –** Phase I/IIa theranostic trial in paediatric patients with high-risk neuroblastoma using $^{64}Cu/^{67}Cu$ SARTATE™ in the US (NCT04023331)[5]

Diagnostic

- **DISCO** – Phase II PET imaging trial of participants with known or suspected Neuroendocrine Tumours (NETs) using ^{64}Cu SARTATE™ in Australia (NCT04438304)[6]

SAR-bisPSMA

Theranostic

SECuRE – Phase I/IIa theranostic trial for identification and treatment of PSMA-expressing metastatic castrate-resistant prostate cancer (mCRPC) using $^{64}Cu/^{67}Cu$ SAR-bisPSMA in the US (NCT04868604)[7]

Diagnostic

- **PROPELLER** – Phase I Positron Emission Tomography (PET) imaging trial of participants with confirmed prostate cancer using ^{64}Cu SAR-bisPSMA in Australia (NCT04839367)[4]
- **COBRA** – Phase I/II PET imaging trial of participants with biochemical recurrence (BCR) of prostate cancer following definitive therapy using ^{64}Cu SAR-bisPSMA in the US (NCT05249127)[8]
- **X-Calibur** – Investigator Initiated Phase I/II PET imaging trial of participants with prostate cancer using ^{64}Cu SAR-bisPSMA led by Dr Luke Nordquist at the Urology Cancer Center and GU Research Network (GURN) in Omaha, Nebraska (NCT05286840)[9]

SAR-Bombesin

Diagnostic

- **SABRE** – Phase II PET imaging trial of participants with PSMA-negative BCR of prostate cancer using ^{64}Cu SAR-Bombesin in the US (NCT05407311)[1]
- **BOP** – Investigator Initiated Phase II PET imaging trial of participants with negative PSMA PET or low PSMA expression disease in patients with suspected BCR of their prostate cancer and patients with mCRPC using ^{64}Cu SAR-Bombesin led by Prof Louise Emmett at St Vincent's Hospital Sydney

Clarity is conducting multiple clinical trials for each of its three key products in order to explore both diagnostic and therapeutic modalities, as well as expand their potential applications in a range of cancers.

PRODUCTS IN DEVELOPMENT

SAR-bisPSMA – Prostate Cancer

SAR-bisPSMA is a next generation, highly targeted theranostic radiopharmaceutical.

It is being developed for diagnosing, staging and subsequently treating cancers that express Prostate Specific Membrane Antigen (PSMA). The product uses either copper-64 (^{64}Cu) for imaging (^{64}Cu SAR-bisPSMA) or copper-67 (^{67}Cu) for therapy (^{67}Cu SAR-bisPSMA).

In addition to the therapy program in metastatic castrate resistant prostate cancer (mCRPC) with ^{67}Cu SAR-bisPSMA, Clarity is also running two diagnostic studies following advice received from the US FDA that ^{64}Cu SAR-bisPSMA is addressing two relevant patient populations for registration:

- pre-prostatectomy/pre-definitive treatment of participants with confirmed prostate cancer
- participants with suspected biochemical recurrence of prostate cancer.

SECuRE – a theranostic $^{64}Cu/^{67}Cu$ SAR-bisPSMA trial

Clarity has completed recruitment for the imaging stage of the SECuRE (NCT04868604)[7] trial. The Company looks forward to progressing to the therapy stage at all seven clinical sites selected for the trial in the US.

SECuRE, which derives from "**Syst**E**mic** **Cu** the**R**anostics in prostat**E** cancer", is a US-based Phase I/IIa theranostic trial for identification and treatment of an advanced form of prostate cancer called metastatic castrate-resistant prostate cancer (mCRPC). Clarity's PSMA imaging product is used to visualise PSMA expressing cancers and select participants who are most likely to respond well to subsequent therapy with Clarity's PSMA therapy product. The initial imaging stage of the trial utilised Clarity's PSMA imaging product to determine where the product went in the body (biodistribution) and what dose of the product was received (dosimetry) in the participants.

SECuRE is a multi-centre, single arm, dose escalation study with a cohort expansion planned for up to 44 patients. The aim of treatment for this trial is to determine the safety and efficacy of ^{67}Cu SAR-bisPSMA as a therapy.

COBRA – a diagnostic ^{64}Cu SAR bisPSMA trial

Clarity has been successfully progressing recruitment into the diagnostic US-based ^{64}Cu SAR-bisPSMA trial for patients with biochemical recurrence (BCR) of prostate cancer since treating its first participant on the 21st of April, 2022.

Clarity opened the COBRA trial (NCT05249127)[8] for recruitment on the 28th of March with the first trial site, Urology Cancer Center and GU Research Network (GURN) in Omaha, Nebraska, actively recruiting shortly after receiving a green light from the US FDA with an official Study May Proceed letter on the 7th of February.

COBRA, which derives from "**CO**pper-64 SAR-bisPSMA in **B**iochemically **R**ecurrent prost**A**te cancer", is a Phase I/II Positron Emission Tomography (PET) imaging trial of participants with BCR of prostate cancer following definitive therapy. This means the participants have indications their prostate cancer returned after a period of remission following initial therapy, but the location of their cancer is unknown.

The primary objectives of the trial are to investigate the ability of ^{64}Cu SAR-bisPSMA to correctly detect recurrence of prostate cancer as well as assess its safety and tolerability.

COBRA is a multi-centre, single arm, non-randomised, open-label trial of Clarity's PSMA imaging product (^{64}Cu SAR-bisPSMA) in 50 participants. It builds on the encouraging preliminary results from the PROPELLER and SECuRE trials as well as the preclinical data. In the COBRA trial, participants are imaged on the day of administration and 24 hours later. The study will investigate if delayed imaging allows better identification of very early disease or patients with low PSMA expression.

PROPELLER – a diagnostic ^{64}Cu SAR-bisPSMA trial

Clarity reached full recruitment in the PROPELLER trial (NCT04839367)[4] in July 2022. The trial commenced in July 2021, and the first participant with confirmed prostate cancer was imaged in August 2021. Top-line data, expected by the end of CY2022, will inform a registrational Phase III trial in this patient population.

PROPELLER derives from "**P**osit**RO**n Emission Tomography Imaging of Participants with Confirmed **P**rostat**E** Cancer Using ^{64}Cu-SAR-bisPSMA: A Mu**L**ti-Centre, B**L**ind**E**d **R**eview, Dose Ranging Phase I study". The main goals of the trial are to:

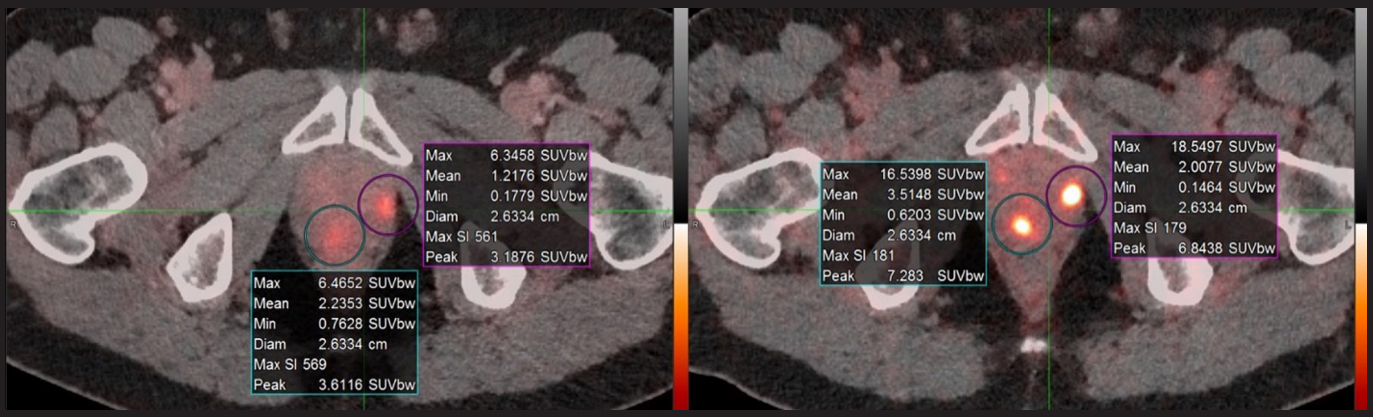
1. Determine the safety and tolerability of ^{64}Cu SAR-bisPSMA in participants with untreated, confirmed prostate cancer and planned for radical prostatectomy (radical prostatectomy means having the prostate gland removed with a surgery);
2. Examine ^{64}Cu SAR-bisPSMA at different dose levels;
3. Determine the ability of ^{64}Cu SAR-bisPSMA to detect primary prostate cancer.

The preliminary data from the patients imaged in the PROPELLER trial to date is encouraging and provides supporting evidence of the high uptake of ^{64}Cu SAR-bisPSMA in the tumours, which has previously been demonstrated in pre-clinical studies, and validates the development of this product as a diagnostic agent.

^{68}Ga PSMA-11 (~200MBq, left) vs. ^{64}Cu SAR-bisPSMA (~200MBq, right) in the same patient; time between serial imaging was 8 days. Standardised Uptake Value (SUVmax)⋆ of the lesions were 6.5 and 6.3 for ^{68}Ga PSMA-11 and 16.5 and 18.5 for ^{64}Cu SAR-bisPSMA

^{68}Ga PSMA-11 (~200MBq)

^{64}Cu SAR-bisPSMA (~200MBq)



⋆ SUV is a measurement of product uptake in tissue normalised to a distribution volume.

SARTATE™ - Neuroblastoma and NETs

SARTATE™ is a next generation, highly targeted theranostic radiopharmaceutical.

It is being developed for diagnosing, staging and subsequently treating cancers that express somatostatin receptor 2 (SSTR2), including neuroblastoma and neuroendocrine tumours (NETs). Like all Clarity products, the SARTATE™ product can be used with copper-64 (^{64}Cu) for imaging (^{64}Cu SARTATE™) or copper-67 (^{67}Cu) for therapy (^{67}Cu SARTATE™).

In 2020, the US FDA awarded Clarity two Orphan Drug Designations (ODDs), one for ^{64}Cu SARTATE™ as a diagnostic agent for the clinical management of neuroblastoma and one for ^{67}Cu SARTATE™ as a therapy of neuroblastoma, as well as two Rare Paediatric Disease Designations (RPDDs) for these products. Should Clarity be successful in achieving marketing approval from US FDA for these two products, RPDDs may allow the Company to access a total of two tradeable Priority Review Vouchers (PRVs) which most recently traded at USD110M per voucher.[10]

CL04 – a theranostic ^{64}Cu/^{67}Cu SARTATE™ Neuroblastoma trial

Clarity successfully completed the first two cohorts of the CL04 theranostic trial (NCT04023331)[5] in neuroblastoma patients. Cohort 1 was completed in February and cohort 2 was completed in August 2022 with no dose limiting toxicities. The Safety Review Committee recommended the trial continues with the dose escalation phase as planned and Clarity is preparing to treat its first paediatric patient in cohort 3.

Each subsequent cohort will receive an increase in the therapeutic dose administered. Generally speaking, higher therapeutic dose is usually associated with greater therapeutic response, up to a certain threshold where toxicity can occur. The CL04 trial is designed to gradually increase the dose of ^{67}Cu SARTATE™ administered to participants in each cohort, with the maximum of 4 cohorts, until the Maximum Tolerated Dose (MTD) is reached.

Cohort 3 participants will be treated with an increased product dose of 275 MBq of ^{67}Cu SARTATE™ per kilogram body weight. This builds on cohort 1, where 3 participants with neuroblastoma received an initial dose of the SARTATE™ therapy product (75MBq/kg body weight) and cohort 2 where additional 3 participants received an increased dose of 175MBq/kg body weight.

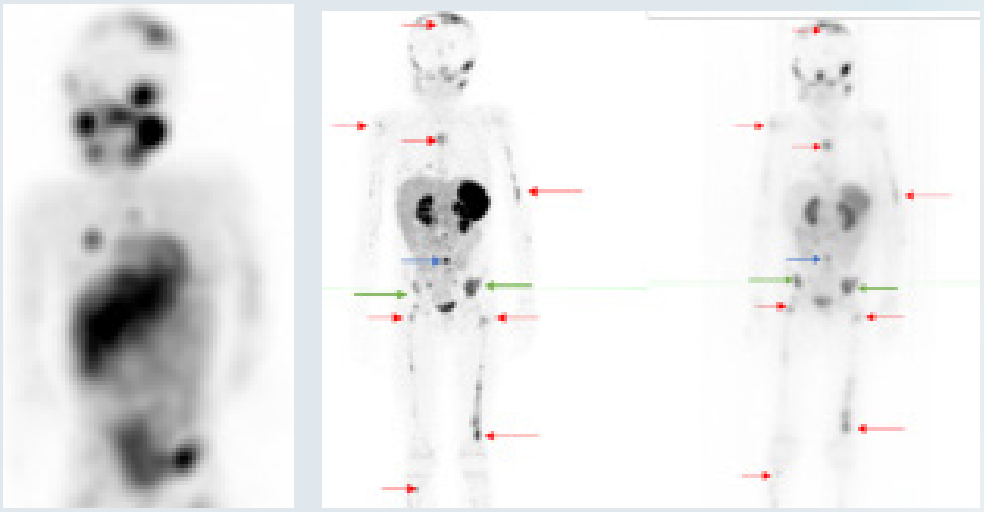
Neuroblastoma therapy CL04 trial status

	Cohort 1	Cohort 2	Cohort 3
Dose	75kBq/ kg body weight	175kBq/ kg body weight	275kBq/ kg body weight
Activity	2.25GBq for 30 kg patient	5.25GBq for 30 kg patient	8.25GBq for 30 kg patient
Status	Complete with no DLTs Advanced to cohort 2 February 2022 ✓	Complete with no DLTs Advanced to cohort 3 August 2022 ✓	Open for recruitment

Recruitment into cohort 3 is currently open at five clinical sites in the US, with additional US clinical sites opening for recruitment in the coming months. Importantly, additional therapy cycles of ^{67}Cu SARTATE™ have been requested by clinicians for participants in cohort 1 and cohort 2. Subsequent therapy cycles are contingent on the Investigators' assessment that the participant is demonstrating therapeutic benefit.

CL04 is a multi-centre, dose-escalation, open label, non-randomised, theranostic clinical trial in paediatric patients with high-risk neuroblastoma. The trial is a Phase I/IIa with up to 34 patients where not only the safety of both ^{64}Cu SARTATE™ and ^{67}Cu SARTATE™ are assessed, but also the effectiveness of ^{67}Cu SARTATE™ as a treatment for neuroblastoma. Patients who show uptake of ^{64}Cu SARTATE™ in tumours will continue in the trial and will receive treatment with ^{67}Cu SARTATE™.

Clarity looks forward to building upon the promising data reported to date and progressing recruitment to higher cohorts.



^{123}I MIBG
Current Standard of Care

^{64}Cu SARTATE™
PET screening 4 hours

^{67}Cu SARTATE™
SPECT scan 24 hours

Early imaging data from Clarity's CL-04 study showing ^{64}Cu SARTATE™ (diagnostic agent) and ^{67}Cu SARTATE™ (therapeutic agent) relative to diagnostic imaging with ^{123}I MIBG in the same patient as baseline. Arrows indicate the same lesions imaged with the diagnostic ^{64}Cu SARTATE™ and therapeutic ^{67}Cu SARTATE™.

DISCO – a diagnostic ^{64}Cu SARTATE™ NETs trial

Clarity's diagnostic imaging study of ^{64}Cu SARTATE™ (DISCO) (NCT04438304)[6] continues to recruit participants at four clinical sites in Australia. The DISCO trial uses the product to image patients with known or suspected neuroendocrine tumours (NETs) and commenced in April 2021.

DISCO, which derives from "**D**iagnostic **I**maging **S**tudy of ^{64}**CO**pper-SARTATE™ Using PET on Patients With Known or Suspected Neuroendocrine Tumour", is assessing the performance of Clarity's SARTATE™ imaging product as a potential new way to help diagnose and manage NETs. It is a Phase II study in up to 63 patients across three sites in Australia comparing the diagnostic performance of ^{64}Cu SARTATE™ at 4 and 20 hours post-administration to the current standard of care, ^{68}Ga DOTATATE, at one hour. In the DISCO trial, participants are imaged on day of administration and 20 hours later. The study looks to build on earlier studies with SARTATE™ (Hicks, R. et al)[11] which demonstrated delayed imaging may lead to better identification of disease.

SAR-Bombesin – Prostate Cancer

SAR-Bombesin is a highly targeted pan-cancer theranostic radiopharmaceutical.

It is being developed for identifying and selecting patients for subsequent treatment of cancers that express a specific receptor called the gastrin releasing peptide receptor (GRPr), including breast cancer and prostate cancer. Like all Clarity products, the SAR-Bombesin product uses copper-64 (^{64}Cu) for imaging (^{64}Cu SAR-Bombesin) or copper-67 (^{67}Cu) for therapy (^{67}Cu SAR-Bombesin).

Clarity is progressing a diagnostic trial of the product in prostate cancer with an open IND in the US (SABRE trial NCT05407311)[1].

Prof Louise Emmett, Clarity's Advisory Board member and a long-standing collaborator, has commenced and imaged the first participants in a prostate cancer Investigator-Initiated Trial (IIT) with ^{64}Cu SAR-Bombesin, BOP.

Clarity is preparing an IND application for a theranostic trial in prostate cancer participants with SAR-Bombesin.

SABRE - a diagnostic ^{64}Cu SAR-Bombesin trial

Clarity opened for recruitment its US-based Phase II SABRE trial (NCT05407311)[1] in August 2022. This followed shortly after the Company received approval of its IND application by the US FDA to evaluate the SAR-Bombesin product as an imaging agent in prostate cancer patients that are PSMA-negative.

SABRE, which derives from "Copper-64 **SA**R-Bombesin in **B**iochemical **RE**currence of Prostate Cancer trial", is a multi-center, single arm, non-randomised, open-label trial in 50 PSMA-negative patients with suspected recurrence of their prostate cancer. The primary objectives of the trial are to investigate the safety and tolerability of ^{64}Cu SAR-Bombesin, as well as its ability to correctly detect the recurrence of prostate cancer.

The SABRE trial was developed in response to the strong demand from clinicians with prostate cancer patients whose cancer was not visible when imaging with currently approved PSMA diagnostic agents or conventional imaging (such as CT and MRI). Their patients were successfully imaged with ^{64}Cu SAR-Bombesin under Australia's Therapeutic Goods Administration Special Access Scheme (TGA SAS)[2-3].

Approximately 20% of prostate cancers with BCR are PSMA-PET negative[12-15]. The inability to localise the return of prostate cancer in these patients limits their treatments options. Given the prostate cancer indication is one of the largest in oncology, there is a significant unmet medical need in this segment. The SAR-Bombesin product targets the Gastrin Releasing Peptide receptor (GRPr) found on prostate and many other cancers. As such, the product could offer valuable imaging and therapeutic options for not only PSMA negative patients, but also the large number of patients who have the target receptor on their cancers.

Building on the promising clinical and preclinical data reported to date, Clarity is also preparing an IND application for a theranostic trial in prostate cancer participants, using ^{67}Cu SAR-Bombesin therapy paired with the imaging agent, ^{64}Cu SAR-Bombesin.

BOP – a diagnostic ^{64}Cu SAR-Bombesin investigator-initiated trial

In September 2022, first participants were recruited and imaged in a diagnostic prostate cancer IIT with ^{64}Cu SAR-Bombesin. The trial commended in August 2022 at St Vincent's Hospital Sydney, led by Prof Louise Emmett.

BOP, which derives from Copper-64 SAR **BO**mbesin in **P**SMA negative prostate cancer, is a Phase II IIT in up to 30 patients. The study will assess the diagnostic potential of one of Clarity's core products, SAR-Bombesin. The BOP trial will be assessing the safety of ^{64}Cu-SAR-Bombesin as well as looking at the diagnostic potential for men with negative PSMA PET or low PSMA expression disease in patients with suspected biochemical recurrence (BCR) of their prostate cancer and patients with metastatic castrate resistant prostate cancer (mCRPC) who are not eligible for PSMA therapy. The trial participants will be imaged on the day of ^{64}Cu SAR-Bombesin administration as well as at later timepoints.

Similar to the SABRE trial, the BOP trial builds on the data generated in PSMA-negative prostate cancer patients at St Vincent's Hospital imaged under TGA SAS[2-3] as well as from pilot diagnostic IIT of SAR-Bombesin in breast cancer patients, the C-BOBCAT trial[16].

MANUFACTURING AND SUPPLY CHAIN

Establishing a dependable and sustainable manufacturing processes and supply chain is intrinsically critical when considering a roll-out of radiopharmaceuticals into the large oncology market. Clarity's next-generation Targeted Copper Theranostics (TCTs) have a number of logistical, manufacturing and environmental advantages that enable the Company to employ the *big pharma* model in radiopharmaceuticals, something that the current generation of products is lacking.

Current generation radiopharmaceuticals have a number of supply chain limitations which are presenting challenges for the growth of the field in the future. Two key considerations are:

- **Short shelf-life of the products** – currently approved radiopharmaceuticals used for diagnostic imaging, such as ^{68}Ga, are short lived, meaning they expire very quickly. This presents logistical constraints for distribution as the products need to be manufactured in or near treatment centres with costly radiopharmaceutical facilities on-site.
- **Volume and consistency in producing the isotopes required to manufacture the products to meet growing demand** – production of therapeutic isotopes, specifically ^{177}Lu, currently relies on a small number of ageing nuclear reactors. Outages at any of these reactors often cause shortages of therapeutic isotopes worldwide.

Clarity's Targeted Copper Theranostics (TCTs) are next-generation radiopharmaceuticals that employ copper-64 (^{64}Cu or Cu-64) for diagnosis and copper-67 (^{67}Cu or Cu-67) for therapy.

In addition to clinical benefits of high accuracy and high precision in treating cancer, the copper pairing also provides significant supply and manufacturing advantages:

- **Diagnostic products based on ^{64}Cu and utilising SAR technology have a longer shelf-life**, allowing central manufacture and regional distribution, potentially reaching more treatment centres and patients.
- Diagnostic **^{64}Cu is produced on cyclotrons** with a single cyclotron able to supply the entire Phase III diagnostic clinical program.
- Therapeutic **^{67}Cu is produced on electron accelerators**, which are relatively inexpensive and infinitely scalable in comparison to nuclear reactor produced isotopes.

Clarity continued to expand its manufacturing and supply chain footprint, creating additional capacity and flexibility to supply products to any ZIP-code in the US with new agreements entered in the quarter ending 30 September 2022:

- Expansion of the agreement with **Evergreen Theragnostics** to include manufacturing and supply of therapeutic ^{67}Cu SAR-Bombesin for Clarity's upcoming theranostic trial in the US, August 2022.
- Supply agreement with **3D Imaging** for ^{64}Cu and ^{64}Cu SAR-bisPSMA for diagnostic Phase III clinical trials, August 2022

These agreements reinforce Clarity's supply chain in preparation for the commercialisation stage and enable the Company to fully utilise the supply and manufacturing benefits of TCTs.

INTELLECTUAL PROPERTY AND DISCOVERY PROGRAM

Clarity has an extensive patent portfolio covering its SAR Technology platform and its existing radiopharmaceutical products, as well as its Discovery Program which is focused on developing new products.

In September 2022, Clarity had the patent application covering SAR-bisPSMA granted in China. This enabled the Company to enhance protection of SAR-bisPSMA which has been progressing through multiple clinical trials in prostate cancer during the reporting period.

The different patents and patent applications in Clarity's IP portfolio span its products as well as manufacturing methods, formulations, and uses across the product range. Clarity's patent applications and granted patents are filed and prosecuted across multiple jurisdictions including the US, major countries in Europe, China and Japan.

The growing patent portfolio is testament to Clarity's aggressive patent strategy which allows the Company to achieve strong protection and to expand the product pipeline, gaining a sustainable competitive advantage in the radiopharmaceutical field.

TEAM AND COLLABORATORS

At the core of Clarity's success is its people. Over the years, the Company has assembled an exceptional team, including its Board of Directors and Scientific Advisory Board, who deliver a unique range of skills and expertise together with extensive experience in the global radiopharmaceutical market.

Clarity's team is driven by the goal of improving treatment outcomes for children and adults with cancer. Despite its relatively small size of fewer than 30 employees in the US and Australia, the team is currently progressing six clinical trials and supporting two investigator-initiated trials with its TCT products whilst continuing to expand the R&D pipeline and Discovery Program through the development of further novel modalities.

This is an exceptional achievement in the industry for a company of Clarity's size and is testament to a superior-performance culture and highly motivated team.

The Company has continued to attract extraordinary talent and to build an outstanding team this quarter. Key addition includes a new Chief Scientific Officer (CSO), Dr Jeffrey Norenberg, while outgoing CSO, Dr Matt Harris, is now serving in a newly created role of Director of Technology.

Dr Jeff Norenberg

Dr Norenberg joined Clarity in September 2022. He has more than three decades of experience in radiopharmaceuticals across both the academic and biotechnology sectors. Dr Norenberg is a globally recognised industry expert in the design and development of novel targeted radioligands for molecular imaging and therapy.

He is a Professor Emeritus of Pharmacy and Anesthesiology and Critical Care Medicine and was the Director of Radiopharmaceutical Sciences at the University of New Mexico Health Sciences Center (UNM HSC) for 27 years. His work in the development of radiopharmaceuticals has resulted in 11 patents, more than 100 scholarly works and more than US$26.5 million in funding for basic and clinical research. He has also been instrumental in 13 Phase I first-in-human studies of investigational new drugs.

FINANCIALS

Clarity's cash balance was $84.7 million as at 30 September 2022. The company's estimated R&D tax incentive claim for FY22 is circa $6 million, which if included, would bring the cash position to over $90 million at the end of the September quarter.

Operating cash outflows for the September quarter were $7.7 million, which is an increase on previous quarterly outflows of circa $4.0 million, due to increased activity on the Company's numerous clinical programs referred to in this Quarterly Activities Report. In addition to clinical trial costs, operating cash outflows relate to payments for research and development, staff costs, administration, and general operating costs.

Use of Funds

(Listing Rule 4.7C.2)

	Prospectus dated 16 July 2021 $ Million	% of Total Funds	Period* to 30 September 2022 $ Million	% of Total Funds
Pre-Clinical	$2.7	2.5%	$1.2	4.1%
Clinical	$84.0	76.6%	$14.7	50.9%
Regulatory	$5.7	5.2%	$0.8	2.8%
Patents	$1.4	1.3%	$0.9	3.1%
Corporate	$10.4	9.5%	$4.7	16.3%
Costs associated with the Offer	$5.4	4.9%	$6.6	22.8%
Total uses	**$109.6**	**100.0%**	**$28.9**	**100.0%**

* From date of admission 25 August 2021.

Costs associated with the offer exceed the amount set out in the "use of funds" in the Prospectus by $1.2 million. This is explained mainly by the additional fee to the Joint Lead Managers and costs relating to the preparation of, and additional due diligence relating to, the Supplementary Prospectus dated 10 August 2021. The Company paid $750,000 to the Joint Lead Managers as part of a potential $920,000 Incentive Fee, payable entirely at the discretion of the Company. The Incentive Fee is described in 10.11.1 of the Prospectus.

As detailed in the Use of Funds table above, the expenditure for the period since admission to 30 September 2022, is in accordance with the Use of Funds outlined in the Company's prospectus dated 16 July 2021 and there are no material variances against the estimated use of funds except for the Incentive Fee noted in the previous paragraph.

Related Party Transactions

(Listing Rule 4.7C.3)

Payments to related parties of the entity and their associates (6.1 of the Appendix 4C) totalled $704,000 for the quarter. This amount included director fees and salaries, executive director bonuses (accrued, but not paid, at 30 June 2022).

This Activities Report has been authorised for release by the Board of Directors.

References

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For more information, please contact:

Clarity Pharmaceuticals

Dr Alan Taylor
Executive Chairman
ataylor@claritypharm.com

Citadel-MAGNUS

Catherine Strong
Investor/Media Relations
cstrong@citadelmagnus.com | 0406 759 268

About Clarity Pharmaceuticals

Clarity is a clinical stage radiopharmaceutical company focused on the treatment of serious disease. The Company is a leader in innovative radiopharmaceuticals, developing targeted copper theranostics based on its SAR Technology Platform for the treatment of cancer in children and adults.

claritypharmaceuticals.com/

Appendix 4C

Quarterly cash flow report for entities subject to Listing Rule 4.7B

Name of entity	
Clarity Pharmaceuticals Ltd	
ABN	**Quarter ended ("current quarter")**
36 143 005 341	September 2022

Consolidated statement of cash flows		**Current quarter $A'000**	**Year to date (3 months) $A'000**
1.	**Cash flows from operating activities**		
1.1	Receipts from customers	-	-
1.2	Payments for		
	(a) research and development	(6,456)	(6,456)
	(b) product manufacturing and operating costs	-	-
	(c) advertising and marketing	(21)	(21)
	(d) leased assets	-	-
	(e) staff costs	(780)	(780)
	(f) administration and corporate costs	(552)	(552)
1.3	Dividends received (see note 3)	-	-
1.4	Interest received	114	114
1.5	Interest and other costs of finance paid	-	-
1.6	Income taxes paid	-	-
1.7	Government grants and tax incentives	-	-
1.8	Other (provide details if material)	-	-
1.9	**Net cash from / (used in) operating activities**	**(7,695)**	**(7,695)**

2.	**Cash flows from investing activities**		
2.1	Payments to acquire or for:		
	(g) entities	-	-
	(h) businesses	-	-
	(i) property, plant and equipment	(15)	(15)
	(j) investments	-	-
	(k) intellectual property	-	-
	(l) other non-current assets	-	-

Consolidated statement of cash flows		Current quarter $A'000	Year to date (3 months) $A'000
2.2	Proceeds from disposal of:		
	(a) entities	-	-
	(b) businesses	-	-
	(c) property, plant and equipment	-	-
	(d) investments	-	-
	(e) intellectual property	-	-
	(f) other non-current assets	-	-
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Other (provide details if material)	-	-
2.6	**Net cash from / (used in) investing activities**	**(15)**	**(15)**

3.	**Cash flows from financing activities**		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	-	-
3.2	Proceeds from issue of convertible debt securities	-	-
3.3	Proceeds from exercise of options	-	-
3.4	Transaction costs related to issues of equity securities or convertible debt securities*	-	-
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	-	-
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other (provide details if material)	-	-
3.10	**Net cash from / (used in) financing activities**	**-**	**-**

4.	**Net increase / (decrease) in cash and cash equivalents for the period**		
4.1	Cash and cash equivalents at beginning of period	92,336	92,336
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(7,695)	(7,695)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(15)	(15)

Consolidated statement of cash flows		Current quarter $A'000	Year to date (3 months) $A'000
4.4	Net cash from / (used in) financing activities (item 3.10 above)	-	-
4.5	Effect of movement in exchange rates on cash held	61	61
4.6	**Cash and cash equivalents at end of period**	**84,687**	**84,687**

5.	Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter $A'000	Previous quarter $A'000
5.1	Bank balances	47,687	55,336
5.2	Call deposits *	37,000	37,000
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
5.5	**Cash and cash equivalents at end of quarter (should equal item 4.6 above)**	**84,687**	**92,336**

** Call deposits represents term deposit accounts with expiry dates more than 90 days after balance date, presented as "financial assets" in the audited financial statements.*

6.	Payments to related parties of the entity and their associates	Current quarter $A'000
6.1	Aggregate amount of payments to related parties and their associates included in item 1	704
6.2	Aggregate amount of payments to related parties and their associates included in item 2	-

Note: Payments in 6.1 include director fees and salaries and executive bonuses accrued for the year ended 30 June 2022.

7.	**Financing facilities** *Note: the term "facility' includes all forms of financing arrangements available to the entity.* *Add notes as necessary for an understanding of the sources of finance available to the entity.*	**Total facility amount at quarter end $A'000**	**Amount drawn at quarter end $A'000**
7.1	Loan facilities	-	-
7.2	Credit standby arrangements	-	-
7.3	Other (please specify)	-	-
7.4	**Total financing facilities**	-	-

7.5	**Unused financing facilities available at quarter end**	-

7.6 Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.

8.	**Estimated cash available for future operating activities**	**$A'000**
8.1	Net cash from / (used in) operating activities (item 1.9)	(7,695)
8.2	Cash and cash equivalents at quarter end (item 4.6)	84,687
8.3	Unused finance facilities available at quarter end (item 7.5)	-
8.4	Total available funding (item 8.2 + item 8.3)	84,687
8.5	**Estimated quarters of funding available (item 8.4 divided by item 8.1)**	11

Note: if the entity has reported positive net operating cash flows in item 1.9, answer item 8.5 as "N/A". Otherwise, a figure for the estimated quarters of funding available must be included in item 8.5.

8.6 If item 8.5 is less than 2 quarters, please provide answers to the following questions:

8.6.1 Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?

Answer:

8.6.2 Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?

Answer:

8.6.3 Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?

Answer:

Note: where item 8.5 is less than 2 quarters, all of questions 8.6.1, 8.6.2 and 8.6.3 above must be answered.

Compliance statement

1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.

2 This statement gives a true and fair view of the matters disclosed.

Date: *31 October 2022*
.....

Authorised by: *Board of Directors*
.....
(Name of body or officer authorising release – see note 4)

Notes

1. This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.

2. If this quarterly cash flow report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, *AASB 107: Statement of Cash Flows* apply to this report. If this quarterly cash flow report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standard applies to this report.

3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.

4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [*name of board committee – e.g.Audit and Risk Committee*]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".

5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.