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Memphasys Limited
ABN 33 120 047 556
Financial Year Ended 30 June 2024
Appendix 4E: Performance Commentary

Appendix 4E

Preliminary final report

Name of entity

Memphasys Limited

ABN or equivalent company reference	Financial year ended ('current period')
33 120 047 556	30 JUNE 2024 (Comparisons to 30 June 2023)

For announcement to the market

				$A'000
Revenue from continuing ordinary activities	**Increased**	**290%**	**to**	**60**
Total income from continuing ordinary activities	**Increased**	**63%**	**to**	**1,005**
Loss from continuing operations	**Increased**	**31%**	**to**	**(4,442)**
Loss from ordinary activities after tax attributable to members	**Increased**	**31%**	**to**	**(4,442)**
Net Loss for the period attributable to members	**Increased**	**31%**	**to**	**(4,442)**

Dividends (distributions)	Amount per security	Franked amount per security
Final dividend	Nil	Nil
Previous corresponding year	Nil	Nil

Record date for determining entitlements to the dividend, N/A

NET TANGIBLE ASSET PER SECURITY

Net tangible assets per ordinary share: 0.2 cents ($0.002) per share (30 June 2023 net tangible assets 0.3 cents ($0.003) per share). The Group has negative net tangible assets as at 30 June 2024.

1. ENTITIES OVER WHICH CONTROL HAS BEEN GAINED DURING THE PERIOD

Nil.

2. ANY OTHER SIGNIFICANT INFORMATION NEEDED BY AN INVESTOR TO MAKE AN INFORMED ASSESSMENT OF THE GROUP'S FINANCIAL PERFORMANCE AND FINANCIAL POSITION

None.

3. FOR FOREIGN ENTITIES, WHICH SET OF ACCOUNTING STANDARDS IS USED IN COMPILING THE REPORT

IFRS.

4. COMMENTARY ON THE RESULTS

Refer to the following Review of Operations for Memphasys Limited and its controlled entities for the period to 30 June 2024.

5. STATUS OF AUDIT

The financial statements are in the process of being audited.

6. DISPUTE OR QUALIFICATION IF NOT YET AUDITED

None.

7. DISPUTE OR QUALIFICATION IF AUDITED

N/A.

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PRINCIPAL ACTIVITIES

Memphasys Limited (ASX: MEM) is an Australian-based emerging small-cap reproductive biotechnology company. The primary aim of Memphasys Limited and its controlled entities ("the Group") is to develop and commercialise novel reproduction and fertility solutions for humans and animals. The Group's investor offering is underpinned by four strong fundamentals, namely its:

- Pipeline of unique reproduction and fertility solutions for human and animal applications, co-developed with Professor John Aitken, a world-renowned leader in fertility;
- Product R&D strategy focused exclusively on addressing unmet demand in global reproduction technology markets;
- Comprehensive 'pathway to market' plan to successfully deliver each product to its defined market; and
- Leadership team with the requisite expertise to deliver strategy and grow long-term shareholder value.

REVIEW OF OPERATIONS

OPERATING OVERVIEW

The Group prioritises the development of its novel reproductive biotechnology products according to their potential to deliver the strongest and/or fastest commercial returns for shareholders.

Memphasys' most advanced product, the Felix™ System, which is now being sold commercially in Japan, is a patented, automated device for quickly and gently separating sperm from a semen sample for use in assisted reproductive technology (ART) procedures.

In addition, Memphasys is undertaking several other projects to extend its commercial product pipeline, most notably its Oxidative Stress measurement system, now called RoXsta™, which is being developed by Memphasys in conjunction with the University of Newcastle (UoN) under the direct guidance of MEM's Scientific Director and global Andrology expert, Laureate Professor John Aitken.

Building Advocacy and Strategic Partnerships

Memphasys' primary activities of the past financial year continued to centre on raising the profile of Memphasys' unique products and building strong partnerships to commercialise them in countries identified as early target markets.

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One of the key outcomes of Memphasys' heightened commercialisation strategy throughout the 2024 financial year eventuated early in the 2024 financial year when an exclusive agreement was signed between Memphasys and Vitrolife Japan KK ("Vitrolife"), a subsidiary of the global Vitrolife Group ("Vitrolife AB"), to sell and distribute the Felix™ System in Japan, for a term of five years. The strategic collaboration enhances the availability of cutting-edge fertility treatment in Japan, a major IVF market, where population levels have been declining for many years. Importantly, the agreement provided the Felix™ System immediate access to the unreimbursed IVF market in Japan, which is approximately 20% of the nation's total IVF market.

Vitrolife AB is a world-leading global provider of medical devices, consumables and genetic testing services dedicated to the human IVF and reproductive health market. It has manufacturing sites in Sweden, Denmark and the United States of America and a direct presence in 25 countries. Vitrolife is recognised within the human IVF market for its innovation and technology leadership and premium quality products. It predominantly markets its own products and only very selectively markets the products of other companies.

As part of the agreement, Vitrolife has provided marketing, sales, and training with an initial focus on key clinicians and high-volume clinics in Japan's private health sector.

In further validation of the potential of the Felix™ System, in January 2024 MEM signed an exclusive five-year distribution agreement with Vitrolife subsidiaries in the Canadian and New Zealand markets on similar terms to the Company's agreement with Vitrolife Japan KK.

These markets present a strong opportunity for early commercial access to build the Felix™ brand and access key opinion leaders to legitimise the product in their landscape.

Memphasys has identified and is continuing to seek distribution in other early access jurisdictions with various potential distributors, including Vitrolife AB.

During the financial year, members of Memphasys' leadership team continued to directly engage stakeholders in the regulatory, market access, investor, commercial and clinical sectors through a series of significant industry events.

Memphasys is now increasingly focusing on informing and educating both the investment and reproductive science communities on the underlying science behind its novel product portfolio. Memphasys also used these opportunities to undertake detailed due diligence of its target markets; to determine the positioning, marketing,

and sales of Memphasys products within each market; to engage potential distributors, including Vitrolife, and examine the opportunities for synergies with Memphasys; and to evaluate the quality and pricing of existing competitor products against its portfolio of products.

It is a key objective of Memphasys to seek commercial partnerships with appropriate stakeholders to provide financial and market support for our products. Our next phase in the coming year will be to leverage these industry partnerships to focus on unmet needs in the market and provide first-in-class solutions to leverage untapped markets.

Endorsement Through Key Opinion Leader ("KOL") Studies and Clinical Trials

Memphasys received strong validation of the Felix™ System from several of its KOL partners during the 2024 financial year with the publication of peer reviewed research in prestigious high-ranking journals. KOL studies provide critical support material for regulatory submissions.

As the respected practitioners of the global IVF sector, KOLs are a reference point for the broader IVF community on industry innovation. Their status within the industry often makes them 'first buyers' of new, innovative products.

In September 2023, a study into the use of the Felix™ System on thirty-three couples undertaken at Coimbatore Women's Hospital Centre in India entitled "First Recorded Normal Live Birth after ICSI with Electrophoretically Isolated Spermatozoa Using the Felix™ System", was presented at the Congress of the Asia Pacific Initiative on Reproduction (ASPIRE 2023) in Adelaide on 9 September.

Memphasys' Indian KOL partner, Coimbatore Women's Hospital Centre, predominantly utilised the Felix™ System for males suffering from high sperm DNA fragmentation to achieve positive pregnancy outcomes. At the Coimbatore Women's Hospital Centre, thirty-three couples were enrolled in a study which utilised the Felix™ System. The study resulted in forty frozen embryo transfers, with a clinical pregnancy rate of 47.5%. From these pregnancies there was a total of eleven live births, equating to a live birth rate of 27.5%. The first live birth of a healthy baby boy from a patient with an extremely high DNA fragmentation level was publicly reported earlier this year1. Notably, the overall live birth result is comparable with the current Australia and NZ benchmark of 31.3% live birth rate across all patients undertaking IVF from frozen embryo transfers. The distinguishing feature of the study is that the outcome was achieved in a demanding patient demographic, where patients had undergone at least one previously unsuccessful IVF cycle, and all males had high levels of sperm DNA fragmentation (average of 34%).

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In May 2024, Memphasys published positive findings from a Japanese clinical trial conducted in Q4-FY2024 in which the Felix™ System outperformed a sperm preparation method comprising two widely used alternative processes, a combination of Density Gradient Centrifugation followed by Swim-Up (DGC+SU).

The clinical trial conducted by the Reproduction Clinic Osaka, Japan, a Key Opinion Leader, and an early adopter of the Felix™ System, reported clear benefits from using the Felix™ System across most clinical measures over the alternative sperm preparation methods.

The key findings from the Japanese clinical trial include the following material results:

- **Processing Time**: The Felix™ System significantly reduces the sperm processing time from approximately 1 hour (using existing methods) to about seven minutes, enhancing laboratory efficiency and patient convenience.
- **Blastocyst Development Rate**: The Felix™ System showed a blastocyst development rate of 58.4%, higher than the 52.9% achieved by DGC+SU. This suggests that the Felix™ System may enhance embryo development stages critical for successful implantation and pregnancy.
- **Good-Quality Blastocyst Development Rate**: The rate was 35.7% with the Felix™ System compared to 26.1% with DGC+SU, indicating a higher proportion of viable embryos for transfer, which can improve IVF success rates.
- **Embryo Utilisation Rate**: The Felix™ System demonstrated an embryo utilisation rate of 58.0%, better than the 54.3% with DGC+SU, implying a more efficient use of embryos generated during the IVF process.

In June 2024, the results of this trial were presented at the European Society of Human Reproduction and Embryology (ESHRE) conference. The findings showed the Felix™ System outperformed a sperm preparation method comprising two widely used alternative processes, a combination of DGC followed by SU.

In the meantime, Memphasys has been undertaking a larger Australian based clinical trial to conclusively demonstrate absolute benefits of the Felix™ System, with this trial expected to be completed by the end of the current calendar year. A Japanese based clinic, Kiba Park, will be joining the clinical trial and is currently submitting the study documents for ethics approval. This is expected to assist in both the overall clinical trial and the proactive activities of Memphasys and Vitrolife Japan KK are conducting to further advocate for the device in Japan.

Vitrolife and Memphasys continue to advance sales activities, however it should be noted this activity will not be significantly expanded until the wider clinical trial is completed and results published shortly thereafter.

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The Group's Strategic Approach to its Target Markets and the Regulatory Environment

The Group develops and commercialises high potential value reproductive biotechnology and proprietary cell separation technologies in the form of novel medical devices, diagnostics, and media.

Memphasys categorises its target markets into two categories: "Early Access Markets" and "High Access Markets".

Early Access Markets are those with less complex regulatory hurdles such as Japan, Canada and New Zealand. In these markets the Felix™ System does not require regulatory clearance prior to sale. These markets represent the shortest pathway to market. Of these markets, Japan is by far the largest.

Australia, the United States, the European Union, India and China are high access markets, which demand extensive clinical data and quality management system files before a submission can be made for regulatory clearance. The timeline around the clearance of regulatory submissions also varies between jurisdictions.

Assuring the Protection of MEM's IP

Patent applications filed from 1 July 2023 to 30 June 2024:

Country	Application No.	Title	Applicant	Technology	Date filed
Australia	2023904171	Methods and devices for measuring antioxidant levels in biological samples	Memphasys Limited	RoXsta™	21-Dec-23

Patents granted from 1 July 2023 to 30 June 2024:

Country	Patent No.	Title	Applicant	Technology	Date of Grant
Australia	2017254772	Biocompatible Polymeric Membranes	Memphasys Limited	Use of PVA membranes in separation or cells or macromolecules	14-Sep-23

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CORE PRODUCT PIPELINE

The Felix™ System

The Felix™ System is Memphasys' first commercial product. It is a patented, automated device for quickly separating high quality sperm from semen for use in human IVF procedures without causing damage to DNA. Felix™ has an estimated addressable global market size of around A$630 million[1].

Growth rates in the assisted human reproduction market are accelerating and one in every six couples having fertility issues.

Current success rates for IVF are relatively low and the treatment is costly. Further, there have been no tangible advancements in sperm processing for IVF procedures in over 40 years.

FEATURES	Felix™		DENSITY GRADIENT CENTRIFUGATION	SWIM-UP (INCL ZYMOT)
Number of steps	One step		Multi steps	Multi steps
Time	Six minutes		30 – 40 minutes	30 – 40 minutes
Process	Automated, desk-top console with disposable, single use cartridges		Laboratory Centrifugation process	Laboratory Swim-up process requires skilled operator
Differentiators	Automation delivers consistent process with less room for error		Multi-step process leads to potential errors	Multi-step process leads to potential errors
	Repeatable high-quality results		Variable results	Variable results
	Capable of processing wide variety of semen samples		Centrifuging potentially causes DNA damage	Underperforms with poor semen samples
	Electrophoretic system identifies and selects sperm with low DNA damage and low oxidative stress		Cannot identify or select sperm with low DNA damage and oxidative stress	Cannot identify or select sperm with low DNA damage and oxidative stress
Pricing	Indicative pricing – mid to premium range Ongoing revenue from disposable cartridges		Indicative labour & equipment pricing A$100 in Australia / US$100 in US	Indicative labour & equipment pricing A$100 in Australia / US$100 in US

Pathway to Market: Early Access Markets

Japan

Following the introduction of regulatory environment in Japan's ART market in 2022, MEM has been working exclusively with clinics operating in the country's substantial private health market. In the financial year to June 2024, Memphasys made multiple sales via its exclusive distribution agreement with Vitrolife to sell to high volume clinics in the privately funded IVF sector.

Provided below are key milestones achieved from this agreement during the financial year:

[1] Allied Market Research Global IVF Services Market 2019 "The Infertility Trap: Why Life Choices Impact Your Fertility & Why We Must Act Now" – Cambridge University Press 5 May 2022

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- During Q1 FY2024, Vitrolife KK placed its first order for 150 Felix™ cartridges to supply five high volume Key Opinion Leader (KOL) fertility clinics in Japan. This included the Kobe clinic, which had ordered directly through Memphasys prior signing the distribution agreement. Vitrolife provided training on the Felix™ System to the KOL clinics and supplied ongoing services as part of the agreement.
- This was followed by a second order of 150 Felix™ cartridges for roll out across other clinics in Japan.
- During Q3 FY2024, a further order of 200 single-use Felix™ cartridges and six Felix™ consoles were directed to six target clinics in Japan.
- As of the end of the financial year, Vitrolife orders in Japan stood at 500 Felix™ cartridges and nine Felix™ consoles.

Vitrolife Japan KK and Memphasys continue to advance sales activities; however, it should be noted this activity will not be significantly expanded until the wider clinical trial is completed in the current calendar year and results published shortly thereafter. In addition, the reimbursement structure in Japan is also presenting some significant hurdles to navigate and may require the creation of an addition category for electrophoresis devices.

Memphasys and Vitrolife Japan KK believe that the immediately addressable market for the Felix™ System in Japan is 20% of the total market, as there is currently no Japanese insurance reimbursement category for the Felix™ System.

Vitrolife Japan KK and Memphasys will be working to access the remaining addressable market once the current clinical trial is completed by the end of the current calendar year.

Canada and New Zealand

In January 2024, Memphasys announced exclusive five-year distribution agreements with Vitrolife subsidiaries in the Canadian and New Zealand markets on similar terms to the Company's agreement with Vitrolife Japan KK.

These markets present a strong opportunity for early commercial access to build the Felix™ brand and access key opinion leaders to legitimise the product in their landscape.

Following these agreements, the plans for training for the Felix™ System have commenced in both markets representing the initial steps of the sales onboarding

process. In addition, Vitrolife has visited the major clinics in New Zealand and at least one major clinic is undertaking a preliminary assessment of the Felix™ System.

Vitrolife AB and Memphasys continue to advance an expansion of sales activities; however, it should be noted this activity will not be significantly expanded until the wider clinical trial is completed.

Pathway to Market: High Access Markets

India

The Indian regulator, the Central Drugs Standard Control Organisation (CDSCO), continued to introduce changes to the regulation of all ART clinical processes undertaken in India and all medical devices sold in India during the financial year.

In July 2023, Memphasys met with CDSCO in New Delhi, which helped to inform and clarify aspects of Memphasys' India strategy. While the regulatory environment continues to develop, it is clear from these discussions that all imported medical devices now require home country regulatory clearance before commercial quantities can be sold in India. MEM took some initial steps to address the change starting with the submission of a voluntary product inquiry with CDSCO.

Australia

As MEM's home country, Australia is critical to Memphasys' commercialisation activities from a regulatory perspective. Australia is considered a highly regulated market and the granting of regulatory clearance in Australia is fundamental to the success of its commercialisation efforts in Australia and in other jurisdictions.

The gathering and provision of clinical data is an essential step in the regulatory process in high access markets.

During the financial year, the clinical trial of the Felix™ System, managed by Mobius Medical Pty Ltd, has gained considerable momentum. Conducted in collaboration with Monash IVF Group Ltd, the trial aims to assess the safety and performance of the Felix™ System against traditional sperm preparation techniques.

With enrolment for the Swim-up study arm now 100% achieved and 50% of the Density Gradient Centrifugation trial arm completed; the trial is on track for completion by the end of the current calendar year. Following this, results will be analysed, and regulatory submissions will be made to the Therapeutic Goods Administration.

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Memphasys continues to evaluate a range of initiatives to increase the speed of this trial including additional sites from Monash IVF and Japan, wherever possible.

DEVELOPING PRODUCT PIPELINE

Rapid Oxidative Stress Assay (RoXsta™)

The aim of RoXsta™ is to produce a novel 'point-of-care' in vitro diagnostic device with single use cartridges. The assay will be a five-minute test for the level of antioxidants in bodily fluids such as semen, blood, follicular fluid, and urine, which will indicate the level of oxidative stress present.

Oxidative stress is the imbalance between reactive oxygen species and antioxidant protection in the body and is a major cause of many diseases. It is a known pre-cursor to DNA damage in sperm and a major contributor to pre-eclampsia and placental failure. It is also a major underlying factor in many other countless chronic illnesses such as diabetes, Alzheimer's disease, and heart disease.

Current testing practices for oxidative stress is laboratory-based and not easily accessible, time consuming and expensive. As a result, oxidative stress often goes undiagnosed and therefore untreated.

Memphasys' device fills a diagnostic void starting with the fertility market, where oxidative stress is a known cause of infertility. Further oxidative stress is implicated in many maternal pre-natal diseases. Therefore, this assay is positioned to change the oxidative stress treatment landscape.

RoXsta™ Pathway to Market

Memphasys have contracted a leading Australian product development company to design the next RoXsta™ product iteration. A preliminary version of the product has been tested at the UoN. MEM will advance the production of a small batch of cartridges in early FY25 and commence KOL testing shortly after.

Memphasys is currently exploring a variety of market access pathways in human and animal fertility. Like Felix™, the human fertility clinical market generally requires full regulatory clearance and has a medium to longer-term pathway to market. MEM will be required to undertake clinical trials with KOL partners, followed by registrations and regulatory clearances in initial target markets. The initial focus in the human fertility clinic market will be early access markets such as Japan, which does not require regulatory clearance to make commercial sales.

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In addition to human applications Memphasys considers its Oxidative Stress measurement system to have important applications in the reproductive animal industry. Oxidative stress results from low levels of antioxidant protection, which are linked to infertility in animals (and in humans) and to levels of DNA damage in both sperm and eggs. It is considered at this stage that the animal market may provide some quick wins for Memphasys with respect to commercialisation of its Oxidative Stress measurement system as the hurdles for registrations and regulatory clearances as significantly less in the animal markets but still present a significant revenue opportunity.

RoXsta™ has a potential broader market opportunity as a diagnostic for assessing and monitoring disease and wellness in humans and in high value livestock. The RoXsta™ application is considered to be of high value to Memphasys as it has the potential to be applied more broadly in sports medicine, cosmetics, agriculture, water supply and food safety assessment.

The Oxidative Stress measurement system offers several advantages:

- **Rapid Point-of-Care Assessment**: Oxidative Stress measurement system provides an extremely rapid assessment of antioxidant activity, with the potential of enabling immediate identification of animals requiring antioxidant supplementation and monitoring the consequences of such supplementation.
- **Wide Range of Applications**: Oxidative Stress measurement system can be used in various situations within the cattle industry, including monitoring oxidative stress in dairy and beef cattle, guiding nutritional supplementation, and optimising reproductive performance.
- **Commercial Potential**: Oxidative Stress measurement system holds substantial commercial merit due to its ability to differentiate itself in the market with unique features and applications that address significant needs in the industry.

Memphasys Animal Breeding Solutions (MBAS)

Post end of financial year, the company announced its Oxidative Stress measurement system had been elevated as a priority given its innovative nature and its ability to offer true product differentiation.

In consultation with industry, Memphasys and Klean Gene have identified the need to conduct a study to establish a baseline and thresholds for oxidative stress likely to be associated with meaningful events in animal reproductive performance. Determination of these events when correlated with reproductive performance could provide significant value to the animal industry.

Memphasys has developed a prototype methodology for oxidative stress measurement, which will be applied to such a study. Applying its early-stage oxidative stress measurement prototype, the study design is intended to include both longitudinal and retrospective analyses to identify oxidative stress thresholds in bovine and potential correlations with productive performance.

In conjunction with Klean Gene, Memphasys is currently exploring industry partnerships and defining appropriate clinical on-farm partners for data and blood collection. Once this process is complete, MEM will provide a detailed update on study progress, including partners, commencement date, and completion date.

The other highly innovative animal product AI-Port has been developed for the purpose of maintaining the viability of livestock semen for up to seven days at a temperature range of 22–25 degrees Celsius. This would enable collection and transportation of semen without needing cryopreservation, while importantly also limiting sperm DNA damage and providing a greater number of viable sperm than cryopreservation to the end-user. This offers considerable efficiency and quality improvements over current practice. To date, two field trials have been completed using AI-Port. Following further optimisation additional studies will be conducted as part of the MABS project pending the acquisition of supporting funds and commercial partnerships.

Other Pipeline Products

Ongoing research currently focussed on the development of novel media for use in human IVF and in animal reproductive technology. The pipeline will extend the breadth of MEM's products in development. The initial work is undertaken in conjunction with the UoN under and is subject to stringent assessment prior to proceeding to full product development.

So far, this work has resulted in a publication, authored by Alena Hungerford, a PhD candidate at the University of Newcastle, and co-authored by Memphasys scientific employees, Laureate Professor John Aitken and Associate Professor Hassan Bakos and titled: "Addition of Vitamin C Mitigates the Loss of Antioxidant Capacity, Vitality and DNA integrity in Cryopreserved Human Semen Samples". This work has been published in the international, peer-reviewed, open access journal "Antioxidants" (see https://doi.org/10.3390/antiox13020247).

The study achieved its primary aim of comprehensively analysing the relationships between antioxidant availability, oxidative stress and sperm quality. Importantly, it demonstrated that the addition of selected antioxidants to the thawed semen samples can restore sperm vitality and DNA integrity; and it also identified the preferred

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antioxidant to be used. A secondary aim was to develop a novel, useful cryoprotectant medium, was also achieved. The medium developed was shown to be an improvement over a commonly used commercial medium. Cryopreservation of human semen samples is commonly used to enable the long-term storage of sperm; however, cryopreservation is damaging to sperm function and current commercial media offer limited cryopreservative protection to sperm.

Notably, the Memphasys owned RoXsta™ System, a state-of-the-art system for rapidly assessing antioxidant activity in biological fluids, was used extensively for the research. Specifically, the system was used to determine how much antioxidant activity was lost from human semen samples when commercial cryoprotectant was added. The antioxidant activity loss was extensive, at 50%. The cryoprotectant medium has applications in both human and animal reproduction and is likely to offer not only a competitive solution to current status quo but also allow MEM to have a market dual offering with the AIPORT media proving multiple market solutions.

Premises relocation and staffing restructure

During the financial year, Memphasys undertook a significant change of management, leading to a more streamlined business. This transition, along with a shift to hybrid working, reduced the need for a large office environment. The old offices were ideal previously, due to their extensive laboratory and manufacturing capabilities. However, with current product development occurring at the University of Newcastle, and manufacturing conducted by various third parties; the old premises were no longer required. This resulted in the business relocation to an adjacent building, enabling a significant reduction in rent and other costs. The move has resulted in savings of more than $200,000 per annum.

In addition, the business undertook a significant review of its workforce. The business now relies less on external consultants and utilises permanent staff for the ensuing complete focus on strategic goals by key personnel. This restructure of staffing resulted in approximately $500,000 of savings per annum.

Savings generated from these initiatives ensured that critical funds can now be redirected to core activities and commercialisation.

Executive transition and other appointments

After 10 years in the position of Managing Director, Ms Alison Coutts stepped down from this position in November 2023. Dr David Ali, who was Director of Business Development, was appointed Acting CEO and Executive Director replacing Alison Coutts on the Memphasys board.

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Subsequently, Dr Ali was appointed to the position of Chief Executive Officer on a permanent full-time basis effective 1 June 2024.

On 13 March 2024, MEM enhanced its board with the appointment of successful corporate executive Michael Atkins as an independent non-executive director.

During the financial year, Memphasys appointed Klean Gene Pty Ltd, a company established by experienced animal sector experts Michael Cameron and Rod Wellstead to assist the Company in evaluating commercial pathways for its animal applications.

Mr Cameron, who has significant experience in implementing strategic farming practices to develop agricultural farmlands into high performing assets, is assisting with Memphasys CEO and Memphasys Animal Breeding Solutions Project Team to undertake evaluations of the effectiveness and commercial potential of its Oxidative Stress measurement system and other products and devices generated by the research team at the University of Newcastle.

Mr Wellstead or other sub-contractors may also be engaged from time-to-time to assist Mr Cameron in the performance of services under the agreement.

Financial Performance

In the financial year ended 30 June 2024, Memphasys incurred a net loss from continuing operations of $4,442,021 (2023: net loss of $3,402,618). There were two main reasons causing the difference:

- termination payment paid to Alison Coutts of $342,540, and
- increased R&D costs of $669,312. Although the total expenditure on R&D activities decreased by $648,791 to $2,658,201 (2023: $3,306,992), following the trend from prior years the composition of this expenditure kept on moving from projects in 'development phase' (capitalised as Intangible Assets in the balance sheet) to projects in 'research phase' (released as R&D expenses to the P&L). Further to this, according to accounting standards, the treatment of the expenditure made on the Felix™ System post market-launch is to be differentiated between expenditure that will 'enhance' versus expenditure that will 'maintain' the asset's economic benefits potential, to be capitalised and released to the P&L, respectively. The table below shows the variances between projects and the resulting increase of $669,312 in R&D expenditure released to the P&L:

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Breakdown of R&D expenditure	2024 $	2023 $	Variation $
Projects in "Development phase". Expenditure that will 'enhance' the asset's economic benefits potential			
Sperm separations human (Felix™)	519,595	1,799,590	(1,279,995)
Membranes	-	38,108	(38,108)
Total capitalised R&D expenditure	**519,595**	**1,837,698**	**(1,318,103)**
Projects in "Development phase". Expenditure that will 'maintain' the asset's economic benefits potential			
Sperm separations human (Felix™)	485,520	-	485,520
Projects in "Research phase"			
New long-life sperm storage media (animal)	663,723	528,893	134,830
Rapid oxidative stress assay (RoXsta™)	989,363	646,791	342,572
Sub-total R&D projects in "Research phase"	1,653,086	1,175,684	477,402
Projects discontinued			
Rapid equine pregnancy prediction assay (Samson)	-	293,610	(293,610)
Sub-total R&D projects discontinued	-	293,610	(293,610)
Total R&D expenditure released to the P&L	**2,138,606**	**1,469,294**	**669,312**
Total R&D expenditure	**2,658,201**	**3,306,992**	**(648,791)**

The tax refund on R&D activities granted by the Federal Government ("Tax Incentive") continues to be the Group's main source of regular revenue. A Tax Incentive of $1,118,973 has been approved by AusIndustry for R&D expenditure incurred in the current financial year.

Memphasys finalised the financial year with a deficiency in working capital of $3,635,499 (2023: $3,318,560) and with net assets of $6,837,755 (2023: $7,384,689).

SIGNIFICANT CHANGES IN THE STATE OF AFFAIRS

There were no significant changes in the state of affairs of the Group during the financial year other than the changes outlined above under the headings "Executive transition and other appointments" and "Premises relocation and staffing restructure".

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1. Consolidated Statement of Profit or Loss and Other Comprehensive Income

Continuing operations		For the year ended 30 June 2024 $	For the year ended 30 June 2023 $
1.1	**Revenue**		
	Revenue from sales or services	60,000	15,371
	Grant income	929,301	587,999
	Income on fair value of convertible note options	96,000	21,000
	Other income	188,541	50,398
	Total revenue	1,273,842	674,768
1.2	**Expenses**		
	Direct costs	(58,394)	(6,150)
	Other production expenses	(57,070)	(1,183)
	Employee benefit expenses	(852,658)	(221,243)
	Research & development expenses	(2,138,606)	(1,469,294)
	Depreciation and amortisation expenses	(717,047)	(619,442)
	Finance cost expense	(417,133)	(428,197)
	Marketing expenses	(111,271)	(150,631)
	Director expenses	(183,438)	(208,687)
	Corporate consultants' expenses	(392,409)	(362,110)
	Compliance, audit, tax and legal expenses	(331,952)	(263,329)
	General & administration	(455,885)	(347,120)
	Total expenses	(5,715,863)	(4,077,386)
1.3	**Loss before income tax**	(4,442,021)	(3,402,618)
1.4	Income tax	-	-
1.5	**Loss after tax from continuing operations**	**(4,442,021)**	**(3,402,618)**
1.6	**Net loss for the year**	**(4,442,021)**	**(3,402,618)**
1.7	**Net loss attributable to members of parent**	**(4,442,021)**	**(3,402,618)**
1.8	**Other comprehensive income / (loss)**		
	Items that will not be reclassified subsequently to profit or loss		
	Net change in fair value of financial assets designated at fair value through other comprehensive income, net of tax	(12,000)	(48,000)
	Total other comprehensive income / (loss) for the year	(12,000)	(48,000)
1.9	**Total comprehensive loss for the year**	(4,454,021)	(3,450,618)

Consolidated accumulated losses

		30 June 2024 $	30 June 2023 $
1.10	Accumulated losses at the beginning of the financial year	(46,173,230)	(42,770,612)
1.11	Net loss attributable to members (*item 1.6*)	(4,442,021)	(3,402,618)
1.12	Expired share options transferred to accumulated losses	185,165	-
1.13	**Accumulated losses at end of the financial year**	(50,430,086)	(46,173,230)

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2. Consolidated Statement of Financial Position

		As at 30 June 2024 $	As at 30 June 2023 $
	Current assets		
2.1	Cash and cash equivalents	277,802	637,832
2.2	Inventories	164,761	130,786
2.3	Other current assets	1,176,000	1,480,113
2.4	**Total current assets**	**1,618,563**	**2,248,731**
	Non-current assets		
2.5	Financial assets at fair value through OCI	14,000	26,000
2.6	Property, plant and equipment	348,359	428,140
2.7	Intangible assets	10,089,761	10,294,734
2.8	Right-of-use asset	359,464	1,670,236
2.9	**Total non-current assets**	**10,811,584**	**12,419,110**
2.10	**Total assets**	**12,430,147**	**14,667,841**
	Current liabilities		
2.11	Trade & other payables	521,374	555,457
2.12	Interest-bearing liabilities	4,363,174	4,469,437
2.13	Non-interest-bearing liabilities	50,000	77,330
2.14	Lease liabilities	60,113	110,913
2.15	Tax liabilities	70,800	47,647
2.16	Provisions	188,601	306,507
2.17	**Total current liabilities**	**5,254,062**	**5,567,291**
	Non-current liabilities		
2.18	Lease liabilities	335,912	1,714,506
2.19	Provisions	2,418	1,355
2.20	**Total non-current liabilities**	338,330	1,715,861
2.21	**Total liabilities**	**5,592,392**	**7,283,152**
2.22	**Net assets**	**6,837,755**	**7,384,689**
	Equity		
2.23	Issued capital	57,280,290	53,417,790
2.24	Reserves	(12,449)	140,129
2.25	Accumulated losses	(50,430,086)	(46,173,230)
2.26	**Total equity**	**6,837,755**	**7,384,689**

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3. Consolidated Statement of Cash Flow

		For the year ended 30 June 2024 $	For the year ended 30 June 2023 $
	Cash flows from operating activities		
3.1	Receipts from customers	60,000	15,371
3.2	Payments to suppliers and employees	(4,465,011)	(2,838,246)
3.3	Government grants	1,315,088	1,504,045
3.4	Recoupment of legal fees	-	12,725
3.5	Interest received	10,606	13,093
3.6	Finance costs	(152,058)	(113,657)
3.7	**Net cash flows used in operating activities**	**(3,231,375)**	**(1,406,669)**
	Cash flows from investing activities		
3.8	Payment for purchases of property, plant and equipment	-	(6,197)
3.9	Receipts for sales of property, plant and equipment	4,545	-
3.10	Payment for cleanroom set up	(77,334)	(154,668)
3.11	Payment for purchases of development assets	(638,257)	(1,815,835)
3.12	**Net cash flows used in investing activities**	**(711,046)**	**(1,976,700)**
	Cash flows from financing activities		
3.13	Proceeds from issues of securities	3,721,001	3,360,416
3.14	Share issue costs	(367,974)	(283,565)
3.15	Proceeds from third-party loans	846,454	849,000
3.16	Repayment of third-party loans	(849,000)	-
3.17	Proceeds from related party borrowings	487,000	-
3.18	Repayment of related party borrowings	(195,000)	(75,000)
3.19	Repayment of lease liabilities	(102,840)	(98,727)
3.20	**Net cash flows from financing activities**	**3,539,641**	**3,752,124**
3.21	**Net (decrease)/increase in cash held**	**(402,780)**	**368,755**
3.22	Cash at beginning of year	**637,832**	**269,077**
3.23	**Cash and cash equivalents at end of year** *(See reconciliation of cash)*	**235,052**	**637,832**

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4. Consolidated Statement of Changes in Equity

	Issued capital $	Reserves $	Accumulated losses $	Total equity $
Balance at 1 July 2023	53,417,790	140,129	(46,173,230)	7,384,689
Movement				
Loss for the year	-	-	(4,442,021)	(4,442,021)
Net change in fair value of financial assets designated at fair value through other comprehensive income, net of tax	-	(12,000)	-	(12,000)
Total comprehensive income for the year	-	(12,000)	(4,442,021)	(4,454,021)
Issue of share capital	4,232,278	-	-	4,232,278
Transaction costs on share issue	(369,778)	-	-	(369,778)
Share options issued	-	44,587	-	44,587
Expired share options transferred to accumulated losses	-	(185,165)	185,165	-
Balance at 30 June 2024	**57,280,290**	**123,551**	**(50,430,086)**	**6,837,755**

	Issued capital $	Reserves $	Accumulated losses $	Total equity $
Balance at 1 July 2022	50,340,937	76,209	(42,770,612)	7,646,534
Movement				
Loss for the year	-	-	(3,402,618)	(3,402,618)
Net change in fair value of financial assets designated at fair value through other comprehensive income, net of tax	-	(48,000)	-	(48,000)
Total comprehensive income for the year	-	(48,000)	(3,402,618)	(3,450,618)
Issue of share capital	3,360,418	-	-	3,360,418
Transaction costs on share issue	(283,565)	-	-	(283,565)
Share options issued	-	111,920	-	111,920
Expired share options transferred to equity	-	-	-	-
Expired share options transferred to accumulated losses	-	-	-	-
Balance at 30 June 2023	**53,417,790**	**140,129**	**(46,173,230)**	**7,384,689**

5. Reconciliation of cash

Reconciliation of cash at the end of the year (as shown in the consolidated statement of cash flows) to the related items in the accounts is as follows.	30 June 2024 $	30 June 2023 $
5.1 Cash on hand and at bank *(item 3.23)*	235,052	637,832
5.2 Call deposit	42,750	-
5.3 Total cash at end of year *(item 2.1)*	**235,052**	**637,832**

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6. Earnings per security (EPS)

		30 June 2024	30 June 2023
6.1	Basic losses per share	(0.0019)	(0.0018)
6.2	Weighted average number of ordinary shares used as the denominator in calculating basic earnings per share	2,310,465,330	1,841,679,638
6.3	Diluted losses per share	(0.0019)	(0.0018)
6.4	Weighted average number of ordinary shares and potential ordinary shares used as the denominator in calculating diluted earnings per share	2,310,465,330	1,841,679,638

7. Matters subsequent to the end of the financial year

On 28 August 2024, the company issued 62.5M ordinary shares to Mr Andrew Goodall, the company's second largest shareholder, at $0.008 per share raising $500,000 to be used to fund the ongoing commercialisation of the Felix device and development of ART products.

No other matter or circumstance has arisen since 30 June 2024 that has significantly affected, or may significantly affect the Group's operations, the results of those operations, or the Group's state of affairs in future financial years.

8. Annual General Meeting

The annual general meeting will be held as follows:

Place	Level 1, 34 Richmond Road, Homebush West, NSW 2140
Date	Friday 22nd of November 2024
Time	11 a.m.

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