

FEBRUARY 2025



MEMPHASYS

REPRODUCTIVE BIOTECHNOLOGY

(ASX:MEM)

UNLOCKING GLOBAL MARKET POTENTIAL IN FERTILITY & DIAGNOSTIC INNOVATION





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This presentation provides indicative timelines for various product development and commercialisation activities. These timelines are based on best current estimates, which are subject to change.

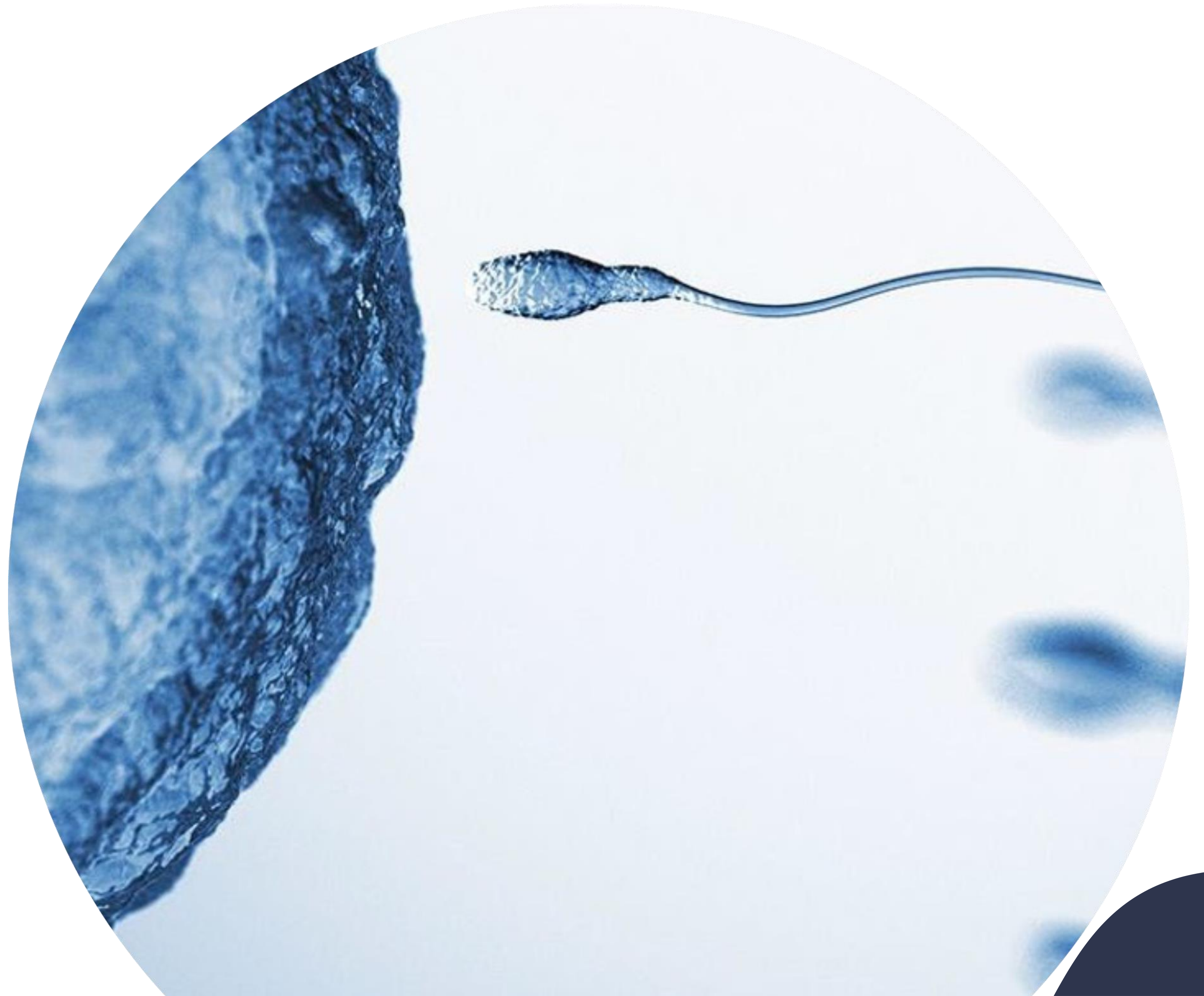
All amounts in this presentation are in Australian Dollars (AUD) unless specifically stated otherwise.

The Board has approved these presentation materials.



PROBLEMS MEMPHASYS IS ADDRESSING

- **Reproductive Health is a growing and global issue.**
- Memphasys technology solutions based on science, are globally leading and address the following issues:
 - Male infertility solutions for **improving sperm quality**
 - **Improvement in efficacy** of IVF processes in humans and animals
 - **Improvement of storage of sperm** to stop DNA breakdown
 - The RoXsta™ system so that conditions can be treated to avoid serious metabolic imbalances. **allows for the rapid and accurate measurement of oxidative and reductive stress**
 - Our technology **solutions apply to both human and select animals** (horses and cattle)





WHY INVEST IN MEMPHASYS?

Cutting-Edge, Market-Ready Technologies

Felix™ and RoXsta™ address significant gaps in reproductive health and oxidative stress diagnostics.

Strategic Partnerships Enabling Global Reach

Agreements with **Vitrolife** and **Heranova** to accelerate international expansion.

Rapidly Expanding IVF & Diagnostic Markets

The global fertility sector is valued at **USD 30B+**, while oxidative stress diagnostics present a multi-billion-dollar growth opportunity.

Proprietary IP & Strong Competitive Advantage

Patented bio-separation and oxidative stress measurement technology provide a robust market position.

Sustainable & Scalable Revenue Model

Recurring income from **single-use consumables, licensing agreements, and commercial distribution partnerships.**

2025: A Transformational Year

Seeking key regulatory approvals, commercialisation of Felix™ and RoXsta™, and strategic partnerships supporting substantial revenue growth.

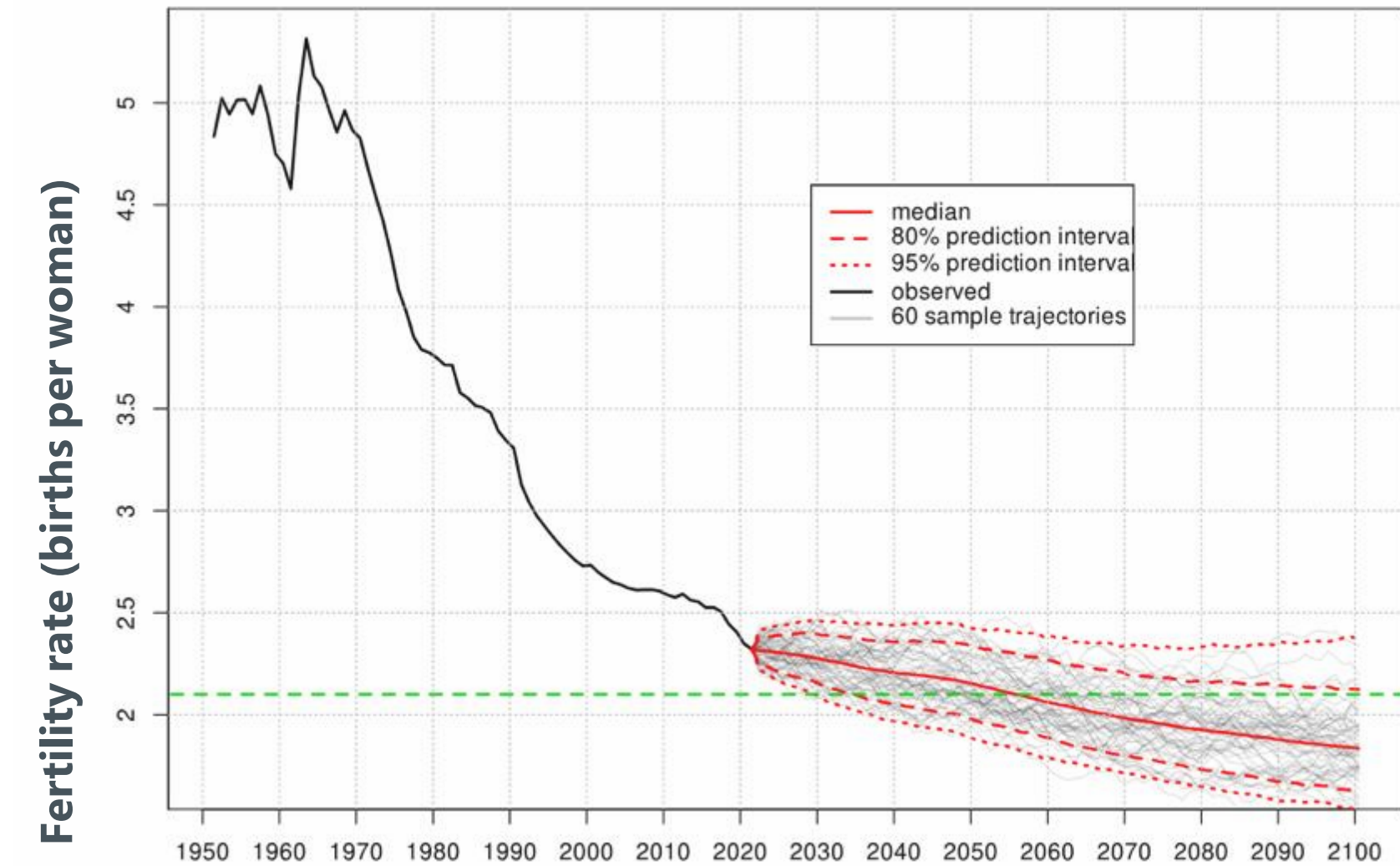
A GLOBAL ISSUE - LARGE ADDRESSABLE MARKET



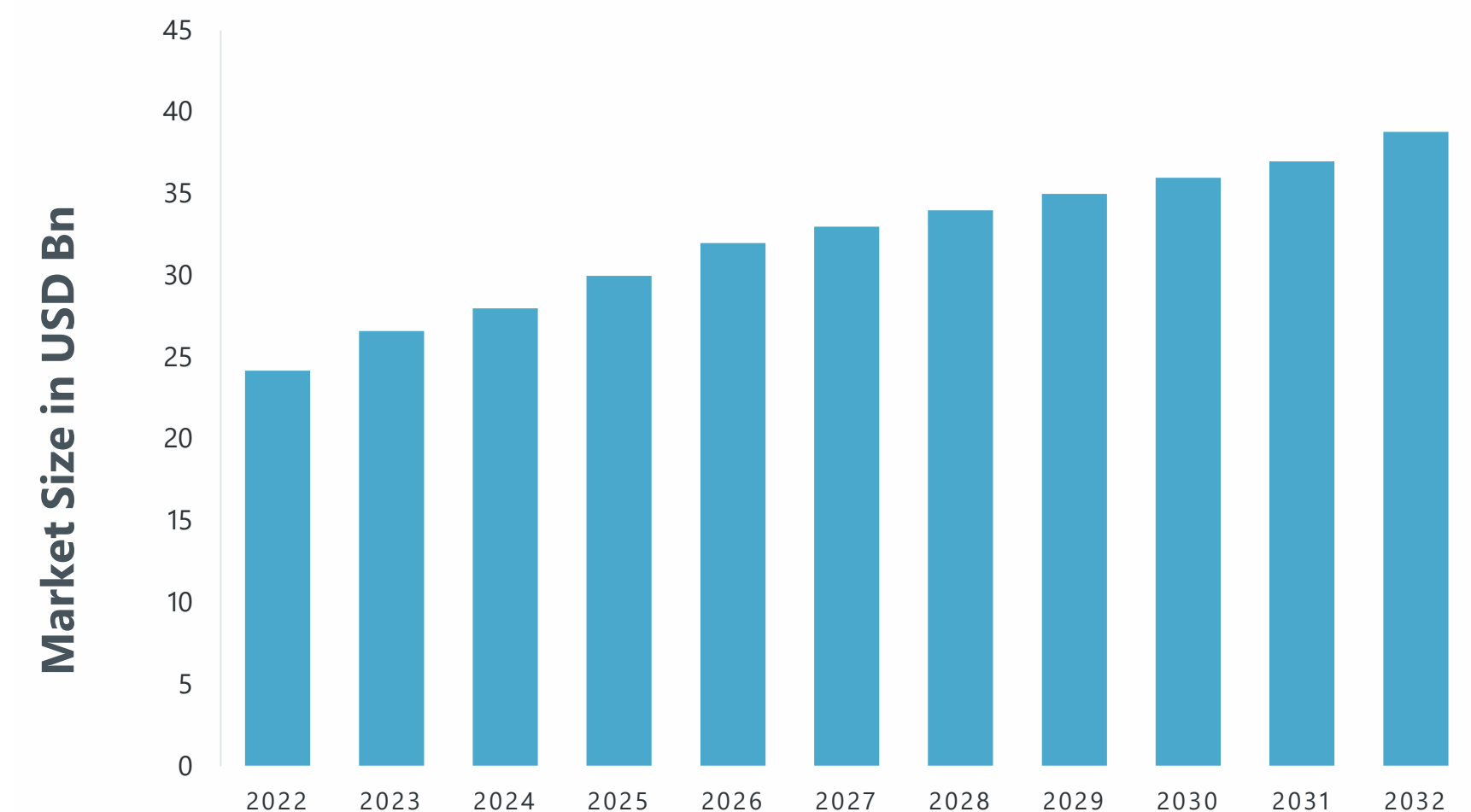
Global fertility decreasing – males account for ~50%

- 1 in 6 couples experience fertility issues
- **Sperm dysfunction is the single most common cause of infertility**
 - Little progress in sperm processing for ART in over 40 years
 - Sperm counts decreasing
 - Sperm DNA Damage via Oxidative Stress are major contributors
 - Solutions to identify oxidative stress and DNA damage are desperately needed
 - Solutions to quickly select high quality sperm are desperately needed

Average total fertility rate



Assisted human reproduction market size -globally





TECHNOLOGY OVERVIEW

Felix™ System – A New Standard in Sperm Selection for IVF

Felix™ is a cutting-edge sperm separation technology that optimises sperm selection for assisted reproductive treatments.

*Using **electrophoresis and proprietary size-exclusion membranes**, the system efficiently isolates **high-quality sperm while minimising DNA fragmentation and oxidative stress**. This enhances fertilisation outcomes compared to conventional methods. The **automated, single-use cartridge design** ensures a consistent and standardised process for IVF clinics globally.*

Key Differentiators:

Rapid processing (6 minutes vs. 30-60 minutes compared to conventional methods)

Rapid process time (6min) reduces exposure to oxidative stress, **improving sperm quality** yielding sperm with **reduced DNA fragmentation**

Irrespective of the operator Felix is easy to use **providing enhanced consistency and laboratory efficiency**

Recurring revenue model through single-use cartridges



TECHNOLOGY OVERVIEW

RoXsta™ System – Transforming Oxidative Stress Diagnostics

*RoXsta™ is an innovative **six-minute oxidative stress measurement system**, tackling a key factor in male infertility, cardiovascular disease, and livestock health. Designed for application in **human reproductive medicine and clinical diagnostics**, RoXsta™ provides rapid and precise oxidative stress profiling, enabling targeted treatments and improved health outcomes.*

Key Differentiators:

Expect to be **first in market point of care** rapid clinical diagnostic

Provides **results in just six minutes** – a fraction of the time required by traditional oxidative stress tests

Applicable across human, veterinary, and multiple industries, opening new revenue streams

Supports personalised treatment plans in fertility and broader health diagnostics

Potential to enhance livestock fertility and productivity through targeted interventions



CLINICAL TRIAL FINALISATION & MARKET IMPACT

Felix™ System Clinical Trial – Commercial Validation

Pivotal clinical trial completed in partnership with Monash IVF, with data collection finalised in December 2024

Initial results set for public release this quarter, to be shared with commercial partners and potential licensees

Clinical Trial findings expected to validate Felix™ as a safe, effective, and faster sperm selection technology than traditional methods

If results reaffirm previous positive studies, **sales to existing partners expected to scale rapidly**



CLINICAL TRIAL FINALISATION & MARKET IMPACT

Strategic Commercialisation & Market Entry

Regulatory planning underway for CE Mark (Europe), TGA (Australia), CDSCO (India), FDA (USA) and NMPA (China)

Heranova Lifesciences partnership driving market entry into **Greater China**, with planned clinical validation and regulatory approvals.

First Felix™ order received in the UAE, advancing Memphasys' footprint in the Middle East's growing fertility sector.

Initial commercial adoption in Japan, Canada, and New Zealand via **Vitrolife Group**, a world leader in ART distribution.

Once registration is achieved **a market in India identified** at several large prestigious IVF clinics – adoption and market entry will be quick .



GLOBAL EXPANSION & COMMERCIAL TRACTION - 1

China Expansion – Strategic Partnership with Heranova

- **China represents 33% of the global market***
- **China's IVF market was valued at USD 5.37B in 2023, projected to grow to USD 9.04B by 2030.**
- **LOI signed with Heranova Lifesciences in December 2024** to spearhead Felix™ System distribution/licencing in China.
- **Heranova conducting initial clinical evaluations**, setting the stage for broader adoption and regulatory approvals.



*Global ART Data Report - Li na Northwest Women's and Children's Reproductive Center July 11, 2024 09:31



GLOBAL EXPANSION & COMMERCIAL TRACTION - 2

Vitrolife Collaboration – Early Commercial Success

- **Exclusive 5-year distribution agreement with Vitrolife Japan KK** covering Japan, Canada, and New Zealand.
- **Commercial sales secured in Japan**, reinforcing the Felix™ System's market position.
- **Clinical validation data from Japan** highlights Felix™ System's superior performance compared to conventional sperm preparation techniques.
- **Provision of trial data to Vitrolife expected to expedite sales in Japan.**





GLOBAL EXPANSION & COMMERCIAL TRACTION - 3

Middle East Market Entry – Strong Growth Potential

- **Dubai fertility clinic places first order for Felix™ for research and evaluation under UAE Ministry of Health guidelines.**
- Memphasys in contact with additional clinics in region who have proactively reached out regarding sales interest.
- **The Middle East & Africa IVF market projected to reach USD 3B by 2033**, with Dubai a key centre for medical tourism and fertility treatments.



Brazil - Targeting commercial expansion

- Partnered with a leading Brazilian andrology clinic to begin clinical utility testing of Felix™



FUNDING & GROWTH ROADMAP

Capital Strategy & Financial Position

Recent capital raise of \$1.857M, strengthening Memphasys' financial position for regulatory approvals and commercialisation efforts

Pursuing strategic funding at company and project levels, including investment, strategic licensing deals and potential joint ventures

Projected revenue growth driven by Felix™ sales, consumable revenues, and RoXsta™ expansion into multi-industry applications



FUNDING & GROWTH ROADMAP

2025 Key Planned Milestones

- **Publication of Felix™ clinical trial results**, bolstering regulatory submissions and supporting commercial traction
- Initiate trials/registration pathways for EU, China
- **Expansion of Felix™ adoption in early-access IVF markets**, leveraging key opinion leaders and distributor networks
- Licencing deal with a major global distributor/partners
- **Scaling RoXsta™ commercialisation**, integrating real-world data into clinical and animal applications
- **Further global distribution agreements to accelerate Memphis' market penetration**



WHY INVEST IN MEMPHASYS?

Cutting-Edge, Market-Ready Technologies with Global Applications & Demand

Felix™ and RoXsta™ address significant gaps in reproductive health and oxidative stress diagnostics.

Strategic Partnerships Enabling Global Reach

Agreements with **Vitrolife** and **Heranova** to accelerate international expansion. More to follow

Rapidly Expanding IVF & Diagnostic Markets

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2025: A Transformational Year

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1.

**FELIX™ SYSTEM:
BETTER TECHNOLOGY
FOR IVF SPERM
PREPARATION**





FELIX™ SYSTEM:

Clear competitive advantages in performance, quality and operating costs



Electrophoretic system selects sperm with both low DNA damage & oxidative stress

Device consists of a console which applies a controlled charge to a disposable cartridge

Cartridge contains the novel electrophoretic technology

Cartridges are single-use with a new one required for each semen sample

Ongoing, repeat revenue from single-use cartridge



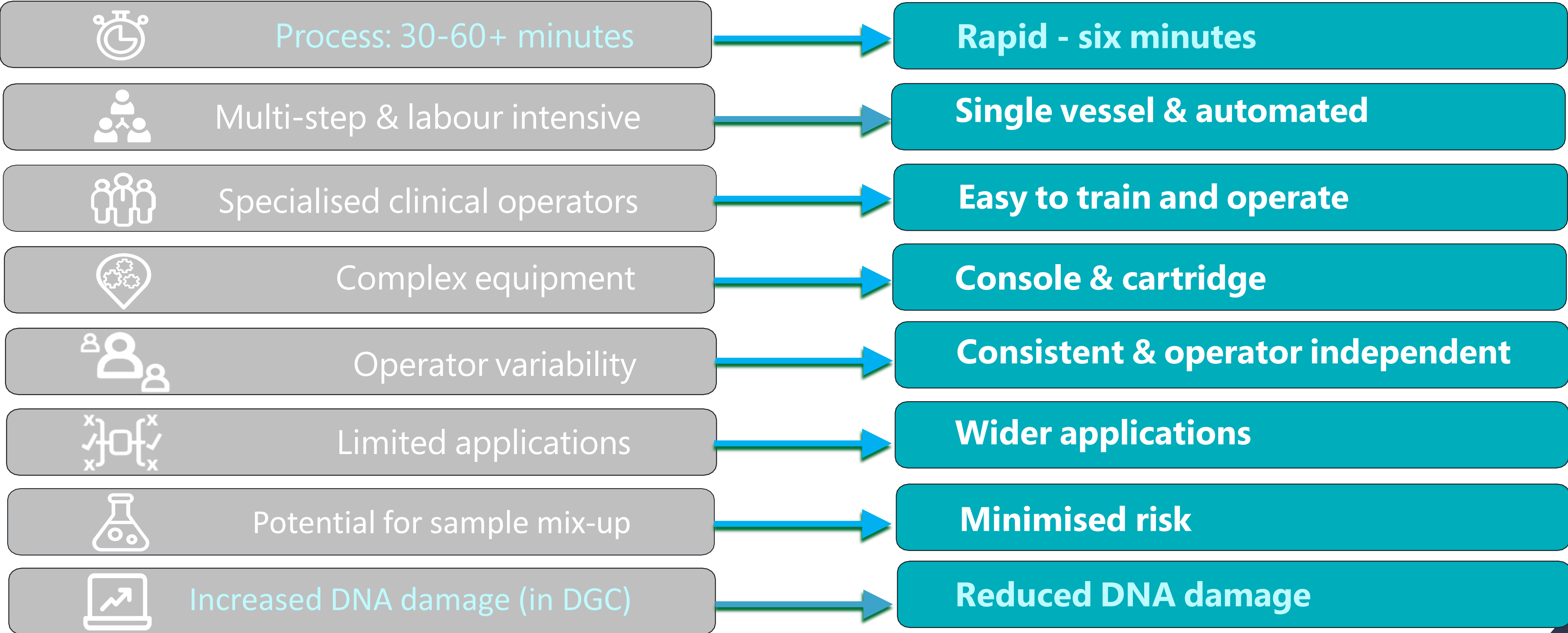
FELIX™ SYSTEM:

Clear competitive advantages in performance, quality and operating costs.

Conventional DGC (Density Gradient Centrifugation) and/or swim-up processes*

VS

Felix™ System



FELIX™ SYSTEM:

Commercialisation Strategy



Initial focus is to build sales in four early access markets:

Global Opportunity - starts with early access markets

- Initial focus - rollout of commercial sales in early access markets
- Key achievements in early access markets will provide:
 - Clinical Data
 - Legitimise Application
 - Build Brand Profile
 - Build End User Certitude
 - Build a Trusted KOL Network
 - Tested and Proven Pathway
 - All the above will help to establishing sales in advanced markets - Australia, USA, Europe and China
- MEM working with large, trusted partners:
 - Heranova in Greater China
 - Vitrolife in Japan, Canada and New Zealand
 - Monash IVF in Australia
 - Indian Women's Center in India

Country	Fresh IVF Cycles in 2018	Expected fresh IVF cycles by 2026	% growth rate	KOL engaged in market	% of global market
Japan	269,110	699,110	+160%	✓	14.5%
India	169,800	489,840	+188%	✓	9.2%
Canada	6,360	21,140	+232%	✓	0.3%
New Zealand	5,300	11,190	+111%	✓	0.3%
TOTAL		1,221,280			

Source: Global IVF services Market 2019 - 2026 by Allied Market Research, 2018

FELIX™ SYSTEM JAPAN:

Japan Early Access Market – expanding into Canada & New Zealand



*Memphasys Director of Operations Professor Hassan Bakos
with representatives from Vitrolife Japan KK*

Choosing the right partner – Vitrolife Japan KK (subsidiary of the Vitrolife Group)

- Exclusive distribution agreement signed for a 5-year term
- Vitrolife Group is a world-leading global provider of medical devices, consumables and genetic testing services dedicated to the human IVF and reproductive health market
- Group employs 1,100 people across 33 countries and its products and services are available in more than 125 countries
- Has direct commercial engagement with ~90% of all IVF clinics in Japan
- Perfect synergistic partner for Memphasys and Felix™
- Working closely with Memphasys to expand sales in Japan – expanding into Canada and New Zealand
- Sales expected to increase significantly post release of clinical trial data

FELIX™ SYSTEM CHINA:

Assessments underway in world's largest assisted reproductive treatment market, China



50 Felix™ System cartridges delivered Sichuan Jinxin Xinan Women & Children Hospital in Chengdu for in vivo assessments

- Major hospital owned by Jinxin Fertility Group Limited (HKEX: JXR). JXR is renowned for ARS and women and children's healthcare, managing six hospitals and five co-managed facilities in mainland China. The Group is China's largest private ARS provider and also a major player in the US.
- Felix Assessments in China led by Heranova Lifesciences HK Limited, a cutting-edge biotechnology company dedicated to delivering diagnostics and treatments for women's health, with a particular focus on endometriosis and female fertility.
- Protocol will assess 50 cases covering routine to challenging IVF scenarios. Outcomes will include a number of performance metrics as well as commercial variables (operating costs, ease-of-use, etc).

Strategic Significance

- Results to pave the way to access China's IVF market, valued at USD 5.37 billion in 2023, is projected to grow to USD 9.04 billion by 2030¹.
- Subject to positive results, Memphasys and Heranova will work towards an exclusive distribution agreement with the option of licensing and manufacturing the Felix™ System in the Territory, and finance of clinical trials and applications for NMPA Registration in the China.



Sichuan Jinxin Xinan Women & Children Hospital in Chengdu, China

¹ <https://www.renub.com/china-in-vitro-fertilization-market-p.php>

FELIX™ SYSTEM UAE:

Order to evaluate suitability in United Arab Emirates (UAE)



Order received for Felix™ from Dubai clinic to evaluate suitability for research use under UAE Ministry of Health and Prevention (MOHAP) guidelines

- Order includes one demonstration unit and 30 cartridges, supplied by Panacea Medizintech LLC, a UAE-based distributor
- Felix™ System is provided on a "For Research Use Only" basis to comply with MOHAP regulations, with no claims for clinical use
- UAE market is strategically important for Memphasys, given its role as a regional hub for advanced medical technologies and its emphasis on innovation in assisted reproductive technology
- The Middle East and Africa (MEA) IVF market is forecast to reach US\$3 billion by 2033¹, with the UAE playing a key role as a leading medical tourism destination, especially for fertility treatments
- Memphasys will collaborate with Panacea Medizintech LLC for evaluation, supporting the system's potential global expansion and regulatory approvals like CE Mark and TGA certification

1. <https://www.sperresearch.com/report-store/mea-in-vitro-fertilization-market.aspx>

FELIX™ SYSTEM BRAZIL:

Targets commercial expansion in Brazil's IVF market



ANDROSCIENCE

LABORATÓRIO REFERÊNCIA
EM ANDROLOGIA



Partnered with Laboratório Androscience, a leading Brazilian andrology clinic, to begin clinical utility testing of the Felix™ System.

- Initial testing involves a Felix™ console and 20 cartridges over a 3-month period.
- Androscience is exploring Men's Health products, including IVF, and is conducting market research to potentially invest in Memphasys for entry into the Brazilian market via licensing.
- Prof. Jorge Hallak, a prominent Brazilian andrologist, will lead a small trial to publish findings and increase market awareness of the Felix™ System.
- Memphasys will present at a major Brazilian reproductive medicine conference in 2025, with Prof. Hallak discussing the clinical utility of the Felix™ System in andrology and IVF settings.
- Brazil's IVF market size is projected to grow to US\$ 413.6 million by 2032¹, representing a CAGR of 11.30% during the forecast period.

¹ Refer to Brazil In Vitro Fertilization (IVF) Market Report by IMARC Group

FELIX™ SYSTEM:

Commercial Financial Model



The commercial model for further licencing agreements for distribution will include some or all of the following:

- An upfront fee to MEM
- A royalty at an agreed rate for the Felix® devices and cartridges used by Licensee.
- Licensee may be authorised to manufacture, at its expense, the Felix® devices and cartridges (subject to the agreed royalty)
- Licensee may be given the right to appoint MEM as the manufacturer to supply Felix® devices and cartridges at a price to be agreed including an agreed margin over the cost of manufacture, plus the agreed royalty.





FELIX™ - STRATEGIC EQUINE FERTILITY STUDY

Initial Results Highly Positive, Validate Commercial Potential

- Three-year equine fertility study to position Felix™ as a leading technology for equine sperm selection
- Initial study results highly positive, validating Felix™ commercial potential in improving the quality of frozen-thawed stallion spermatozoa
- Felix™ requires no major modifications for entry into the non-thoroughbred equine breeding sector
- The ongoing study expected to generate data necessary for market entry with sales on track within 12 months
- Study has \$30,000 annual cost (partially offset by Australian R&D tax credits) but is expected to leverage over \$1M in research value
- Global Equine Artificial Insemination (AI) market estimated to be valued at US\$681.1M (2023) and projected to grow at CAGR of 5.7% (2024-2032).¹
- Felix™ poised to capture a significant portion of the market which consists of 3,950 equine semen collection and processing facilities worldwide
- MEM is actively pursuing partnerships with global distributors

Three-year study being conducted in conjunction with the University of Newcastle and EquiBreedUK Ltd, a global leader in equine reproduction. Two of Australia's leading thoroughbred stud farms participating in the study



1. Global Market Insights Inc., Equine Artificial Insemination Market Share <https://www.gminsights.com/industry-analysis/equine-artificial-insemination-market>

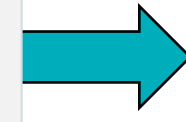
FELIX™ SYSTEM:

Major Regulated Markets 2024-2025 – To Be Pursued With Strategic Partners*



Regulatory Strategy – CE mark

- MEM pursuing CE mark registration in Europe post-clinical trial completion, offering a faster and more lucrative pathway than the Australian Therapeutic Goods Administration (TGA) registration.
- Regulatory advice suggests CE mark process could take less than a year post-submission, providing a quicker route than the TGA. The technical file for regulatory submission is currently being prepared to ensure submission in H2 FY25, regardless of the exact trial completion date.



	Regulator	Pre-submission	Clinical Trials	Comments	Recently published data on IVF cycle numbers
EU	CE Mark	✓	Clinical trial (complete) anticipated to be sufficient	Application pending post trial completion. Regulatory submission in the first half of 2025.	588,762 (2019)¹
Australia	TGA	✓	Anticipated CE mark registration expected to accelerate subsequent TGA registration. Existing clinical trial (complete) anticipated to be sufficient	New regulatory strategy leverages synergies between CE mark and TGA registration applications	102,157 (2021) ²
India	CDSCO		Clinical trial (complete) anticipated to be sufficient	In-country approval is standard pathway Investigating earlier access options	337,000 (2021) ³
China	NMPA	✓	TBD	Heranova will under the umbrella of a licencing agreement fund a clinical registration study.	1,305,967 (2022) ⁴
USA	FDA	✓	In-country clinical trial required	Will be a de novo FDA classification	413,776 (2021) ⁵

*Timetable is constantly being reviewed to expedite timeframe

- <https://academic.oup.com/humrep/article/38/12/2321/7320081>
- Assisted reproductive technology in Australia and New Zealand 2021 – University of NSW
- <https://health.economictimes.indiatimes.com/news/industry/indian-fertility-industry-to-witness-huge-growth-in-coming-years/91487508>
- <https://www.globaldata.com/store/report/china-assisted-reproductive-technology-procedures-market-analysis/>
- <https://www.cdc.gov/art/artdata/index.html>



RECENT M&A IN THIS SPACE

CooperSurgical Acquisition of Zymot (Feb 2023)

- CooperSurgical acquired Zymot, a company specialising in sperm separation devices, to enhance its IVF product offerings.

Vitrolife's Purchase of Igenomix (Aug 2022)

- Vitrolife acquired Igenomix, a genetic testing company, for €1.25 billion to strengthen its position in the IVF space, combining genetic testing with IVF solutions.

Hamilton Thorne's Acquisition of IVFtech (Jan 2023)

- Hamilton Thorne purchased IVFtech, a Denmark-based manufacturer of laminar flow workstations and incubators, to enhance its IVF lab equipment offerings.

FUJIFILM Irvine Scientific's Partnership (June 2023)

- FUJIFILM Irvine Scientific partnered with ASTEC to distribute its time-lapse incubation systems in the U.S., broadening its IVF technology portfolio.

Origio's Merger with Research Instruments (April 2022)

- Origio, part of CooperSurgical, merged with Research Instruments to create a comprehensive IVF device and technology platform.

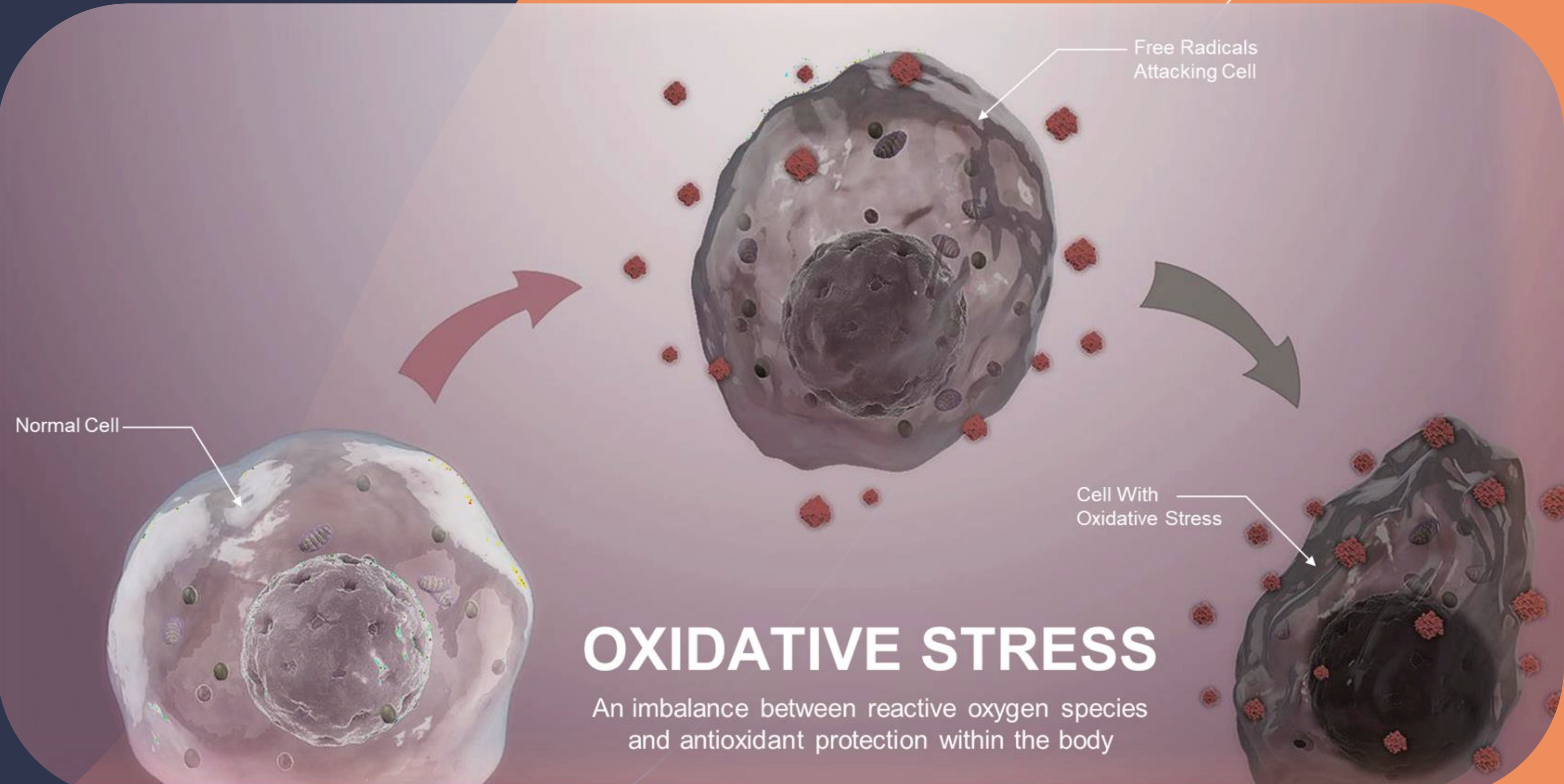


FELIX™ PROJECT TIMELINES

	2024	2025				2026			
	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct
Clinical Trials									
Felix™ System completed in collaboration with Monash									
Review trial data and publish of top line results									
CE Mark Approval - Europe									
Submission									
Review									
Approval (guide based on current timelines)									
TGA Approval - Australia									
Submission									
Review									
Approval (guide based on current timelines)									
CDSCO Approval - India									
Submission									
Review									
Approval									
China Partnership									
LOI Agreement									
Clinical Utility Testing & Result Evaluation									
In Clinic Commercial Sales Special Access									
Develop other Private market in China including Hong Kong									
Licencing									
China local Manufacturing options									
NMPA Registration and Planning									
Offshore Manufacture									
Explore other manufacturing options (Other markets)									
World-wide expansion									
Commence discussions with FDA subject to fundng and/or partner collaboration									
Commence US based trial									

2.

OXIDATIVE STRESS MEASUREMENT SYSTEM: A RAPID IN VITRO ANTIOXIDANT ASSESSMENT

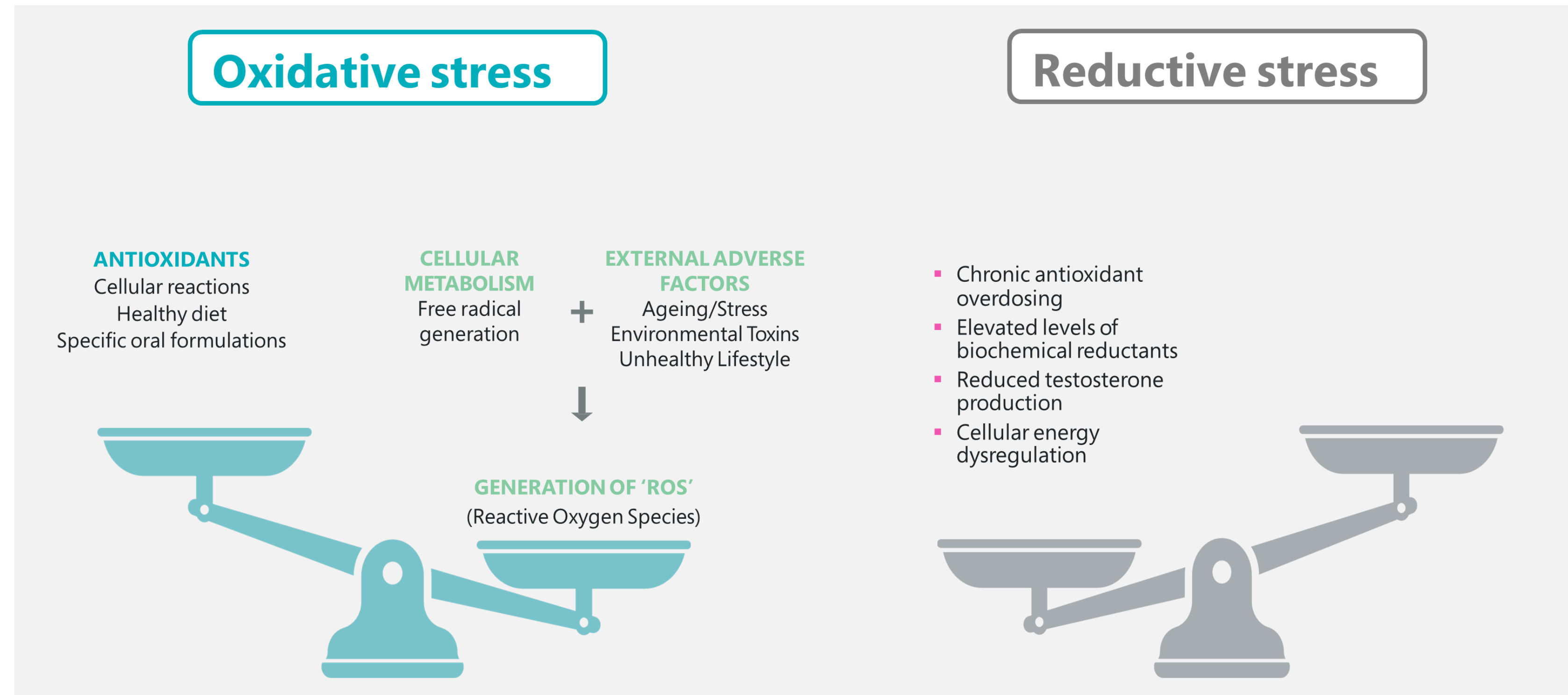




THE ISSUE:

Oxidative & Reductive Stress – Serious chemical imbalances

- Oxidative stress - an imbalance between reactive oxygen species and antioxidant protection within the body and can also severely affect fertility in both humans and animals.
- Reductive stress - an abnormal accumulation of reducing equivalents despite being in the presence of intact oxidation and reduction systems
- Imbalance tends to increase with age and can contribute to serious diseases.





SIMPLE EXPLANATION

Oxidative stress is like rust forming on metal. Just as metal rusts when it's exposed to oxygen over time, your body can "rust" or get damaged inside when it has too many harmful molecules (free radicals) and not enough of the good ones (antioxidants) to protect it.

For example, if you cut an apple and leave it out, it turns brown because of oxidation. Similarly, inside your body, if there's too much oxidation without protection, it can lead to damage and health issues.





THE ISSUE:

The adverse effect of oxidative / reductive stress imbalance

Oxidative stress



- Aging
- Impaired sperm production and maturation
- Increased sperm DNA damage
- Potential transgenerational effect
- Mutation in offspring
- Miscarriage
- Pre-eclampsia
- Chronic inflammatory disease
- Cancer
- Neurodegenerative disease
- Neuropsychiatric disorder
- Diabetes
- Cardiovascular disorders
- Chronic fatigue
- Asthma
- Erectile dysfunction

**MEMPHASYS
OPERATES IN THE
MIDDLE**

**Memphasys is helping
to avoid both
Oxidative & Reductive
Stress**

Reductive stress



- Heart failure
- Neurogenesis inhibition
- Decreased cellular metabolism
- Muscular dystrophy
- Pulmonary hypertension
- Rheumatoid arthritis
- Alzheimer's disease
- Diminished life expectancy



WHAT HAS MEMPHASYS DONE – DOING NOW ?

TESTING A WORKING PROTOTYPE OF ITS FIRST-IN-WORLD OXIDATIVE STRESS MEASUREMENT SYSTEM

- **Developed the Oxidative Stress Measurement System:** Positive assay results, with distinct time advantages (6 minutes). Oxidative Stress is not routinely measured due to the slow and complex methods currently used
- **Run KOL studies, positive results achieved**
- **Built a prototype, which is being tested in field**
- **Moving into an industry backed study to** establish a baseline and thresholds for oxidative stress likely to be associated with meaningful events in reproductive performance.
- **Three-year equine fertility study¹** with University of Newcastle and EquiBreedUK to explore oxidative stress measurement in both thoroughbred and non-thoroughbred horses. Thoroughbreds - studies investigating how physical exertion and oxidative stress affect reproductive health, with preliminary findings currently under analysis.
- **Provisional Patent Approval received** for its innovative antioxidant assay system, RoXsta™
- **First paper in major international journal** - paper detailing the technical development of the RoXsta™ accepted for publication in a leading international peer-reviewed journal.
- **Proactive engagement with industry**



1. Oxidative stress measurement to be tested along with Felix device as part of the study (see Slide 19 for more information)

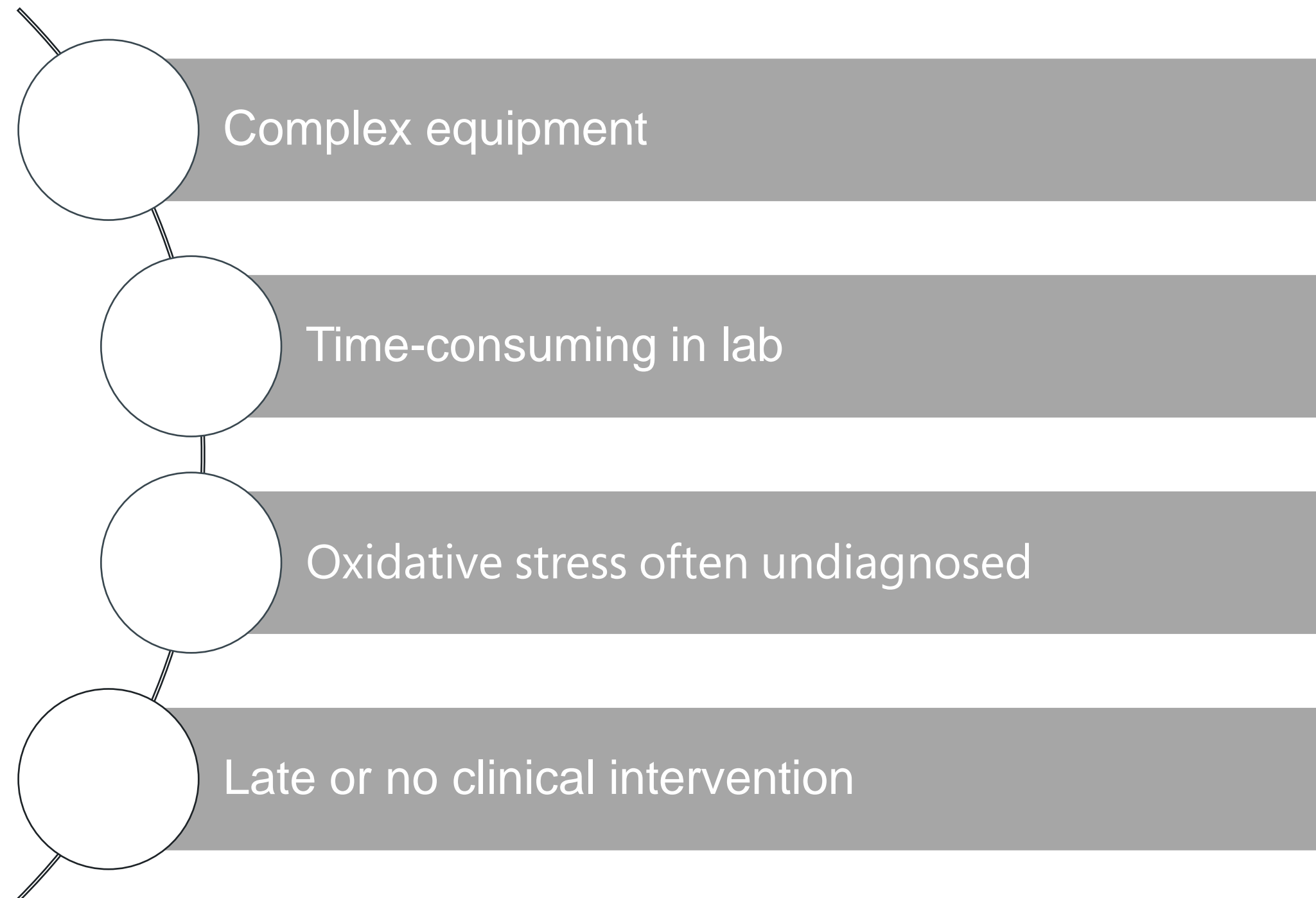


UNMET DIAGNOSTIC NEED:

Technology can address multiple needs and large global market

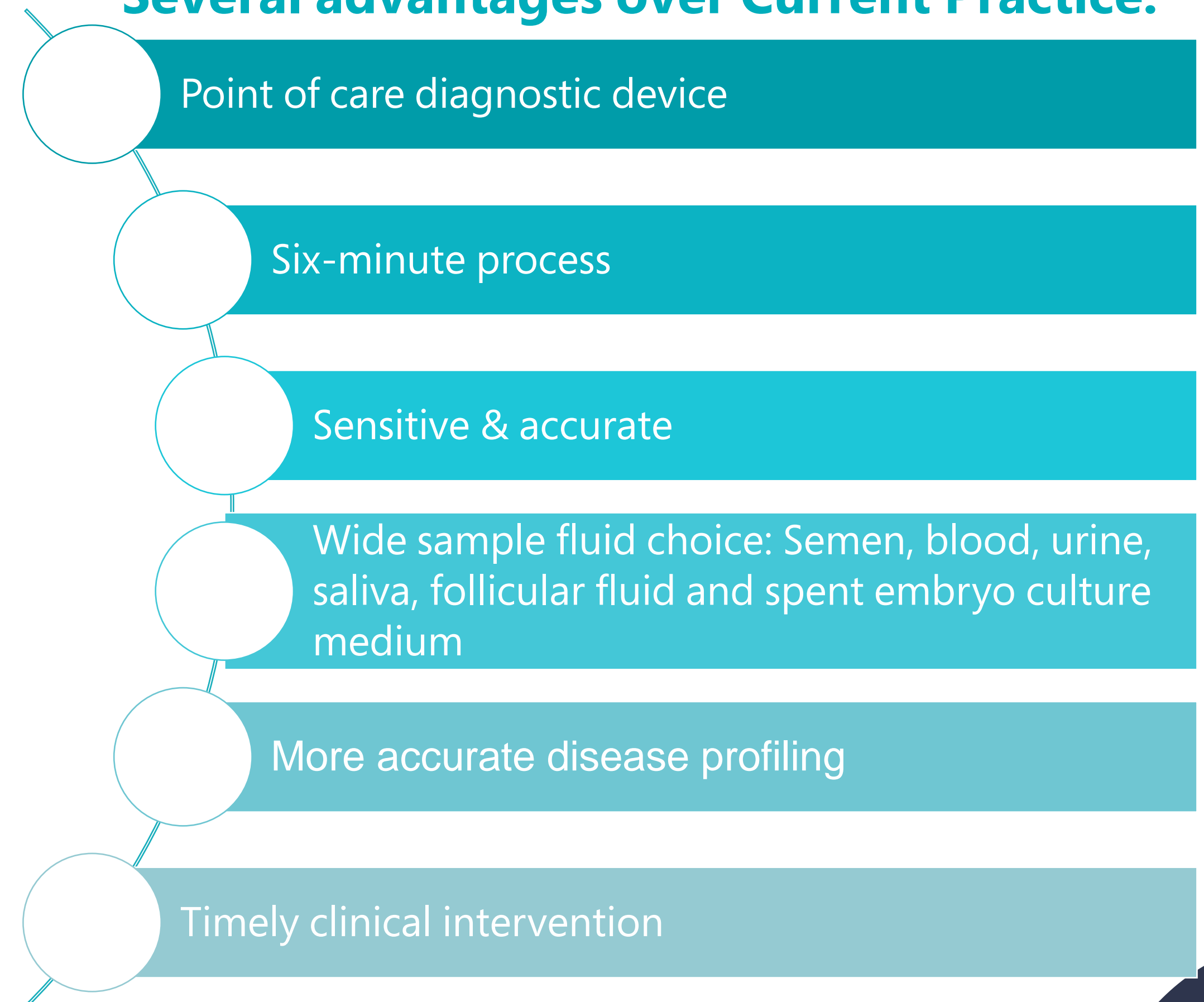
Current Practice

Testing for oxidative stress is rare:



Oxidative Stress Measurement System

Several advantages over Current Practice:





ROXSTA COMMERCIAL APPLICATIONS

TARGET MARKET AND OPPORTUNITY

User group	Application	Estimated Market Size ¹
Fertility researchers*	<ul style="list-style-type: none"> Researching underlying etiology of infertility & gestational issues 	\$3b
IVF clinics	<ul style="list-style-type: none"> Screening for infertility issues in male and female patients 	\$3b
Obstetricians	<ul style="list-style-type: none"> Diagnosing and monitoring the progress of pregnancy; detecting foetal distress 	\$4b
Food technology industry*	<ul style="list-style-type: none"> Screening for food antioxidant activity, e.g. to use in product marketing Addition of new, healthy antioxidants to extend food shelf life/improve health benefits 	\$3b
MEM internal use	<ul style="list-style-type: none"> Screening for most powerful antioxidants to develop improved media for human & animal reproduction 	
Other clinician groups	<ul style="list-style-type: none"> Diagnosing and monitoring various health conditions beyond fertility issues e.g. cardiovascular, neurological, endocrine etc. 	TBD
Point of care consumer test	<ul style="list-style-type: none"> Assessing antioxidant status at home 	
Personalised medicine	<ul style="list-style-type: none"> Ability to titrate individualised levels of antioxidants and other drugs to administer 	
Animal Health Industry*	<ul style="list-style-type: none"> Meat quality, IA and domestic pet markets 	TBD
Cosmetic Industry	<ul style="list-style-type: none"> Application of antioxidants for skin and ageing 	TBD
Crop Management	<ul style="list-style-type: none"> Crop health and production 	TBD

*User groups which Memphasys is currently pursuing.

1. Conservative market size assumptions, based on industry interview estimates



OXIDATIVE STRESS MEASUREMENT SYSTEM

Important application in the reproductive animal industry (husbandry, meat quality)

- Scoping study commenced to assess the potential use of RoXsta™ System to determine threshold levels of oxidative stress in the bovine and potential correlations with productive performance.
- Preliminary pregnancy results expected late February 2025.
- If initial findings are promising, the study could lead to a larger-scale clinical trial in Autumn 2025, in collaboration with the University of Newcastle.
- The study represents a key step in exploring innovative solutions for improving livestock productivity, with potential significant benefits for the agricultural sector.

Oxidative stress: Important role in animal genetics and husbandry

Selection for Resilience

- Breeding programs often focus on selecting animals that are genetically resilient to oxidative stress.
- Resilience can improve the animal's overall health, disease resistance, and longevity.

Genetic Markers

- Researchers identify genetic markers associated with oxidative stress resistance.
- Markers help in selecting and breeding animals that can better withstand oxidative stress, leading to healthier and more productive livestock.

3.

BOARD AND MANAGEMENT





OUR LEADERS

Distinguished Emeritus Professor John Aitken

- Memphasys Scientific Director
- Global leader in reproductive biology, heading up world-class research team at University of Newcastle.
- Leads scientific development of MEM's pipeline products through R&D, and is now assisting in commercial strategy based on his international reputation and links.
- *Ranked #1 in the world in the cell biology of spermatozoa and germ cells, having published over 650 research articles and work cited >67,000 times**.
- Exceptionally well connected at a **GLOBAL** level to researchers, laboratories and clinics operating throughout the international reproductive industry.



*Source: Expertscape.com

**h-index of 120, highest citation index in his field and in the top 5% for all of Biology and Biochemistry



MEMPHASYS BOARD

Experienced at bringing products to market

Lindley Edwards
Chair



- Over 30 years experience in financial services, corporate governance, and strategic advisory roles
- CEO of AFG Venture Group, specialising in mergers, acquisitions, strategic partnerships, and technology commercialisation
- Strong expertise in corporate governance, risk management, and executing growth strategies across various industries
- Academic qualifications include degrees in Business (Accounting, Banking & Finance), a Postgraduate Diploma in Corporate Governance and advanced studies in digitization and innovation (MicroMasters and PhD)

Dr. David Ali
CEO



- 35 years' experience in Animal and Human health across research, discovery, clinical trials, medical affairs, medico-commercial strategy
- PhD in Pharmacokinetics
- Managed BD activities and business units for global companies
- Experienced the business end of pharmaceutical product pre-launch and launch strategy and product life cycle management

Paul Wright
NE Director



- More than 25 years' experience in development and sales of innovative medical devices and diagnostic tools
- Specialised in commercialising early research products
- Served as CEO for three leading companies developing, manufacturing and marketing medical devices and diagnostic instruments
- 8 years in Business Strategy Consulting with Bain & Co.

Michael Atkins
NE Director







- Involved with formation of, and capital raising for, and management of, many listed companies on the ASX, both as a Chairman/Director and as a corporate advisor
- Most recently was a Senior Advisor to international stockbroker Canaccord Genuity in Australia
- Prior to that spent + 16 years in senior corporate advisory roles with several Australian stockbrokers,, including 10 years as Director – Corporate Finance at Paterson Securities
- Currently NED of ASX listed SRG Global Limited



EXECUTIVE TEAM LEADERSHIP TEAM

Experienced at bringing products to market

<p>Dr. David Ali <i>CEO</i></p> 	<p>Distinguished Emeritus Professor John Aitken <i>Scientific Director</i></p> 	<p>Pablo Neyertz <i>Director of Finance</i></p> 	<p>Assoc. Prof Hassan Bakos <i>Director Operations</i></p> 
<ul style="list-style-type: none">▪ 35 years' experience in Animal and Human health across research, discovery, clinical trials, medical affairs, medico-commercial strategy▪ PhD in Pharmacokinetics▪ Managed BD activities and business units for global companies▪ Experienced the business end of pharmaceutical product pre-launch and launch strategy and product life cycle management	<ul style="list-style-type: none">▪ Global leader in reproductive biology, heading up world-class research team at University of Newcastle▪ Leads scientific development of MEM's pipeline products through R&D, and is now assisting in commercial strategy based on his international reputation and links▪ *Ranked #1 in the world in the cell biology of spermatozoa and germ cells, having published over 650 research articles and work cited >67,000 times**▪ Exceptionally well connected at a GLOBAL level to researchers, laboratories and clinics operating throughout the international reproductive industry	<ul style="list-style-type: none">▪ Over 30 year's experience in the accounting industry▪ Has been a member of the Institute of Chartered Accountants Australia & New Zealand since 2008.▪ He worked with Ernst & Young in Argentina as a senior auditor in the banking industry▪ Has worked as a Group Financial Accountant in telecommunications and as a Senior Financial Accountant at Screen Australia.	<ul style="list-style-type: none">▪ 17 years' experience delivering research in the assisted reproductive technology (ART) industry▪ 8 years as Scientific Director for Monash IVF (ASX: MVF)▪ 3 years working with Prof John Aitken at the University of Newcastle

*Source: Expertscape.com

**h-index of 120, highest citation index in his field and in the top 5% for all of Biology and Biochemistry



IP HELD

Forte IP Ref	Country	Application No.	Patent No.	Title	Applicant	Technology
10018AUP1	Australia	2017344755	2017344755	Electrophoresis Device	Memphasys Limited	Non-circulating buffer chambers
10018AUP2	Australia	2023201892	2023201892	Electrophoresis Device	Memphasys Limited	Non-circulating buffer chambers
10018CNP1	China	201780078771.4	ZL201780078771.4	Electrophoresis Device	Memphasys Limited	Non-circulating buffer chambers
10018EPP1	Europe	17861998.7		Electrophoresis Device	Memphasys Limited	Non-circulating buffer chambers
10018HKP1	Hong Kong	62020003214.7		Electrophoresis Device	Memphasys Limited	Non-circulating buffer chambers
10018JPP1	Japan	2019-542754	7097900	Electrophoresis Device	Memphasys Limited	Non-circulating buffer chambers
10018USP1	US	16/343676	11466250	Electrophoresis Device	Memphasys Limited	Non-circulating buffer chambers
10018USP2	US	17/894975	12134781	Electrophoresis Device	Memphasys Limited	Non-circulating buffer chambers
10019AUP1	Australia	2017344756	2017344756	Sperm separation by electrophoresis	Memphasys Limited	Use of PVA membranes in sperm separation
10019CNP1	China	201780078498.5	ZL201780078498.5	Sperm separation by electrophoresis	Memphasys Limited	Use of PVA membranes in sperm separation
10019EPP1	Europe	17862525.7		Sperm separation by electrophoresis	Memphasys Limited	Use of PVA membranes in sperm separation
10019HKP1	Hong Kong	62020003065.3		Sperm separation by electrophoresis	Memphasys Limited	Use of PVA membranes in sperm separation
10019JPP1	Japan	2019542755	7058275	Sperm separation by electrophoresis	Memphasys Limited	Use of PVA membranes in sperm separation
10019USP1	US	16/343680	10946346	Sperm separation by electrophoresis	Memphasys Limited	Use of PVA membranes in sperm separation
10020AUP1	Australia	2017254772	2017254772	Biocompatible Polymeric Membranes	Memphasys Limited	Use of PVA membranes in separation or cells or macromolecules
10020EPP1	Europe	17785171.4		Biocompatible Polymeric Membranes	Memphasys Limited	Use of PVA membranes in separation or cells or macromolecules
10020USP1	US	16/095653	10962537	Biocompatible Polymeric Membranes	Memphasys Limited	Use of PVA membranes in separation or cells or macromolecules
10021WOP1	PCT	PCT/AU2024/050943		Methods and devices for measuring antioxidant levels in biological samples	Memphasys Limited; The University of Newcastle	RoXsta
	US	10/556910	8088265	Cell Separation	Memphasys Limited	Cell separation by electrophoresis
	US	10/574911	8123924	Sperm cell separation by electrophoresis	The University of Newcastle	Sperm separation by electrophoresis



MEMPHASYS FINANCIAL SNAPSHOT:

As at 18/02/2025

KEY DATA ¹	A\$
Share price	\$0.008
Shares on issue	1,771.0M
Market capitalisation	\$14.2M

OWNERSHIP STRUCTURE ¹	%
Peters Investments	19.5
A Goodall	12.7
A Coutts	7.0
Top 20	62.5

CONVERTIBLE NOTES	
Peters Investments	3M (at A\$3M face value & maturity as of 30 June 2025)*

Capital raising expedites commercialisation activities

- Capital Raising: \$1.905 million was secured late 2024 through a Placement and SPP to fund strategic initiatives focused on accelerating commercialisation

¹ Source: ASX website (as at 18/01/2025)



MEMPHASYS
REPRODUCTIVE BIOTECHNOLOGY

Thank you

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