



ASX: *MEM*

## Felix

A unique device to treat male infertility

**Alison Coutts**

Executive Chairman, *Memphasys Limited*



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# Pressing need for improvements in IVF

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## IVF:

- **Expensive** - up to \$10,000 per try, average of 2.2 tries before successful pregnancy, success not always possible
- **Physically and emotionally draining**
- **Increases risk of miscarriage, conceiving genetically impaired child**

## What if there were a technology that:

- Increased the likelihood of pregnancy, and
- Increased likelihood of giving birth to a healthy baby?

**What would that be worth?**



# Need to improve male fertility

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## Male Infertility

- A factor in ~50% of infertile couples
- Affects ~1/3rd of men over 40
- Has been rapidly increasing for the past few decades
  - environmental and lifestyle factors
- No meaningful advances in male sperm preparation treatments since the advent of IVF



Sperm quality,  
rather than quantity,  
is the issue

# Human IVF market is large and rapidly growing

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## Key Human IVF market statistics

<b>IVF treatments market size 2012/2020</b>	US\$9.3bn / US\$21.6bn
<b>Estimated no. IVF cycles pa</b>	~6 million
<b>IVF consumables market</b>	US\$450m
<b>Consumables cost per cycle</b>	~\$400
<b>Cost to patient per cycle (developing/developed countries)</b>	~US\$2,000 / ~US\$10,000

## Accessible Market<sup>1</sup>

<b>IVF treatments including ICSI (Intra Cytoplasmic Sperm Injection)</b>	>\$600 million
<b>ADD IUI (Intra Uterine Insertion)</b>	> \$600 million
<b>TOTAL</b>	<b>~\$1.2 Billion</b>

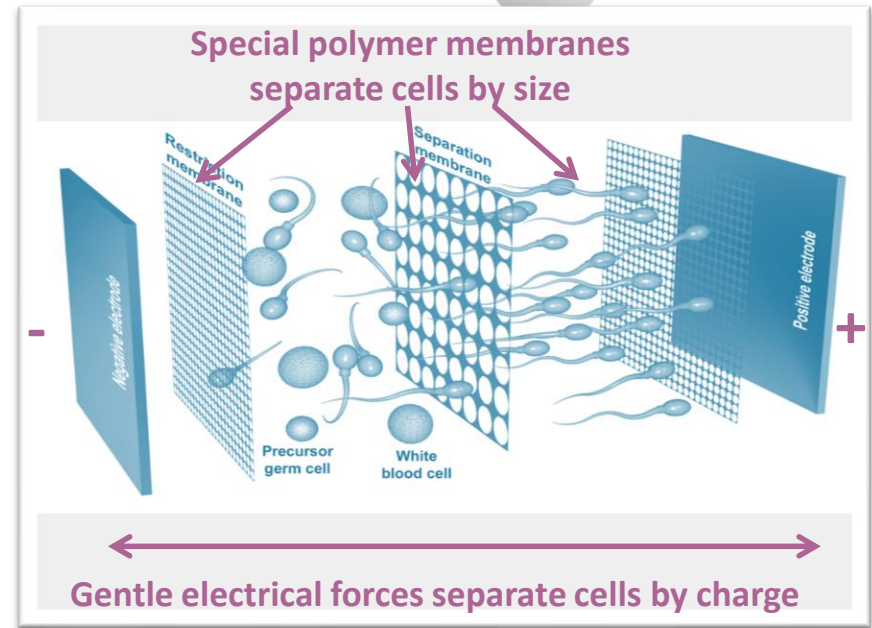
<sup>1</sup> Assuming \$100 per cycle

# MEM's technology provides better chance of success

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- Unique, patented IP, proven to work
- Developed with Prof John Aitken, world-renowned fertility expert
- Separates the 'best' quality, least DNA-damaged sperm<sup>1</sup> from IVF semen samples
- Sperm DNA damage - A major factor affecting ability to conceive and to give birth to a healthy child

<sup>1</sup>Best quality are most negatively charged



# Memphasys' 'Felix' device has major advantages over current IVF sperm processing methods<sup>1</sup>

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Current methods	'Felix' device
▪ 30-40 minute, manual	✓ 3 minute, automated
▪ Damage DNA	✓ Gentle, no centrifuging, no cell damage
▪ Limited in types of sperm samples they can treat	✓ Can treat wide range of sperm samples
▪ DNA-damaged sperm can unknowingly be selected	✓ Selects best quality, least DNA-damaged sperm

<sup>1</sup> *Differential Gradient Centrifugation ('DGC') / 'Swim Up'*

# Achievements and upcoming milestones

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**2008:** Human births with earlier prototype device achieved

**Mid 2017:** Prototype device with re-usable cartridges built



**2018 (now):** Development of clinical system with single-use cartridges commenced

**2019:** 10-15 international IVF Key Opinion Leader (KOL) in-vitro study; CE Mark approval (Europe) possible by the end of 2019 cal. year





# We've come a long way!

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Corporate Statistics	
Shares on issue	363,922,478
Market capitalisation	\$18.2 million (@ 5 cents)

Top 10 Shareholders		
1	Mr Andrew Ernest Goodall	24.39%
2	Peters Investments Pty Ltd	18.32%
3	Ms Alison Coutts	16.21%

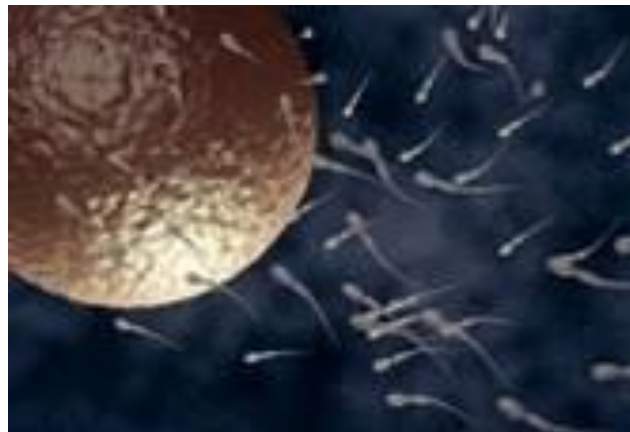
**Top 3 hold ~ 59%**  
**Top 10 hold ~ 72%**

## Unique, patented sperm separation technology

- Developed with world-renowned reproduction specialist - Professor John Aitken

## Felix device for Human IVF

- Proven to work; low technology risk
- Need for better sperm processing for IVF
- Large, fast-growing global IVF market
- Development of Felix device for IVF clinics on track
- Relatively small funding and time frame before device is commercially available



# Thank you

## Alison Coutts

Executive Chairman, *Memphasys Ltd*

30-32 Richmond Rd, Homebush NSW 2140 Australia

**Phone:** +612 8415 7300