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Engineers in Australia develop AI sperm checker to enhance in vitro fertilisation success

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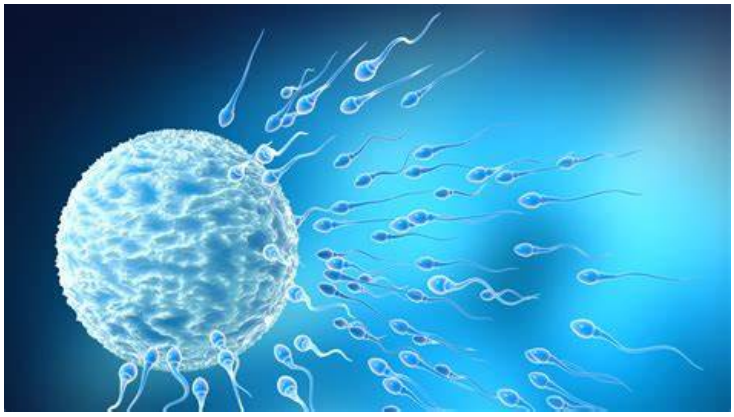
With great potential to make the sperm selection process faster and improve outcomes



Engineers in Australia have developed an artificial intelligence (AI) technology that accurately assesses the quality of live sperm in seconds, removing the need for invasive procedures that compromise sperm viability in IVF treatments.

Current clinical practices to evaluate sperm morphology require human analysis and chemical staining of the sperm cells which can cause damage. But this new method, from Monash University's Department of Mechanical and Aerospace Engineering in collaboration with Monash IVF, works on live, unstained sperm, preserving their viability.

The newly published study found the artificial intelligence model could analyse sperm imaging with over 93 per cent accuracy in just a few seconds. By precisely choosing the highest quality sperm without affecting its viability, the technology could pave the way for standardised sperm selection through automation in IVF clinical settings.

Lead researcher Dr Reza Nosrati said the speed and precision meant doctors could make better-informed decisions faster than ever before.

"The consistency and reliability of our AI model provide unprecedented accuracy in live sperm morphology classification. By providing a clear and precise analysis of sperm quality, it offers promising opportunities for enhancing clinical sperm selection practices and reducing day-to-day variability in clinics. With this tool, we hope to improve the outcomes of fertility treatments and offer new hope to couples struggling to conceive", said Dr Nosrati.