

# Method for assessing the fertilising potential of sperm by computer-aided sperm analysis

- **SCHEDA**
- **APPROFONDIMENTI**

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A German university offers a method to assess the fertilising potential of sperm. It is based on longitudinal axis rotation within the framework of computer-aided sperm analysis (CASA). The diagnostic power of these systems is thus significantly improved. Providers of computer-aided sperm analysis systems are sought for license agreements.

Infertility affects 10-15% of couples with male and female (co-) factors contributing on a similar scale. Male infertility is however often difficult to diagnose. In about 30% of infertile men the infertility seems to rest on a dysfunction of the sperm rather than on a faulty sperm production. If diagnosed at all, the mechanisms underlying sperm dysfunctions remain largely unknown, precluding an evidence-based treatment decision in reproductive medicine. Thus there is an urgent medical need for novel biomarkers of sperm dysfunction and male infertility that allow selecting the appropriate assisted reproductive technique, improving patient care and reducing the medical and financial burdens. A German university can now offer a novel biomarker that partly closes this diagnostic gap: the rotation of human sperm around their longitudinal axis (rolling) as an essential feature of sperm motility. Rolling enables sperm to navigate by rheotaxis, which is vital to reach the oocyte. A novel microscopic procedure based on dark-field illumination is provided that determines and quantifies rolling in a semen sample. Thereby rolling is employed as a highly predictive surrogate parameter for the ability of sperm to undergo rheotaxis. The university foresees that both the novel microscopic technique and software requirements are implemented into existing systems for computer-assisted sperm analysis (CASA). New or upgraded CASA systems that read out this novel biomarker, reflecting the current state of scientific knowledge about sperm function, would feature a substantial competitive advantage over present CASA systems. The university offers license agreements to providers of computer aided sperm analysis (CASA) systems who are interested in integrating the invention in their systems as well as upgrade existing system at customer sites. Further development can be included too.

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