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WHICH-A.R.T: METHOD FOR ACCURATELY DETECTING MALE INFERTILITY

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T-020924

Published date: 3/14/2025

WHICH-A.R.T: Method for Accurately Detecting Male Infertility

Value Proposition: *Fertility treatment designed to quickly and accurately detect the fertilization capacity of sperm.*

Technology Description

Researchers at Washington University in St. Louis have developed a rapid and clinically feasible method to individualize fertility treatment plans for men facing infertility. Currently, there is a lack of precise diagnostic tools for accurately determining male infertility in infertile couples, leading to challenges in directing appropriate treatment. In addition, current diagnostic tools primarily report sperm concentration, morphology, and motility but cannot predict whether normal-appearing sperm will be able to fertilize an egg on their own.

This method, named WHICH-A.R.T., assesses two molecular mechanisms that are essential for sperm fertilization capacity – a change in sperm membrane potential that makes the membrane more negative inside (membrane hyperpolarization) and increased intracellular calcium concentration, which allows for the accurate diagnosis of sperm fertility, thus giving reproductive specialists the ability to personalize fertility treatment plans for infertile couples.

Stage of Research

Prototype

Applications

- Treat male infertility

Key Advantages

- Accurately diagnosis sperm fertility
- Lessens time and resources required to construct fertility treatment
- Suitable for clinical use

Patents

Patent application filed

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