

New treatment could double pregnancy rates

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Pregnancy rates could be doubled for couples undertaking fertility treatment, thanks to a revolutionary project being trialled by the University of Adelaide.

Researchers from the University's Discipline of Obstetrics and Gynaecology have devised a new formula to significantly improve embryo implantation rates and reduce pregnancy complications in assisted reproductive technology (ART).

Early trial results involving mice are encouraging and provide proof-of-concept that the treatment doubles pregnancy rates.

Lead researcher Associate Professor Claire Roberts has been awarded \$294,750 by the Federal Government to demonstrate that the treatment is safe and improves pregnancy outcome and postnatal health in offspring.

"Assuming our success, the concept will be taken to the next stage in human trials with the help of the University's commercial partner for this technology, MediCult," Associate Professor Roberts says.

The National Health and Medical Research Council development grant is a major breakthrough for the 15% of couples in first world countries who are either infertile or suffer from recurrent miscarriages.

"Assisted reproductive technologies provide some hope for these couples, but they have a relatively poor success rate with only 15-40% of

embryo transfers resulting in ongoing pregnancies, depending on maternal age," Associate Professor Roberts says.

"Fertility in women declines significantly with age, and so too does the success of ART. Since women are delaying childbearing, ART is increasingly required to make couples' desire to have children a reality. Currently, 2-3% of the 250,000 annual births in Australia are a result of ART and this number is expected to rise."

Existing ART procedures triple the risk of pregnancy complications such as miscarriage, preeclampsia, intrauterine growth restriction and pre-term births, some of which are life-threatening to the mother and/or her baby. Associate Professor Roberts and her colleagues hope to correct these problems with the new treatment.

If trials are successful, researchers could also achieve the "holy grail" of IVF - a single embryo transfer, which reduces the incidence of multiple pregnancies in ART and maximises the chance of a successful pregnancy.

"ART techniques act primarily to facilitate conception, rather than to promote embryo implantation and placentation. Therefore, they do not assist in some forms of infertility and pregnancy complications. We hope this new product will address that," Associate Professor Roberts says.

The project team also includes Associate Professor Jeremy Thompson and Associate Professor Mark Nottle, all members of the School of Paediatrics and Reproductive Health at the University of Adelaide.

Source: University of Adelaide

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