

Researchers question treatment of infertility with stem cells

February 4 2015, by Carina Eliasson

New studies by Swedish researchers at institutions including the University of Gothenburg and Karolinska Institute are questioning the notion that infertility can be treated with stem cells.

Whether or not infertility can be treated with stem cells has been a matter of debate for many years. The classical theory is based on the idea that the [eggs](#) a woman has are the ones she has had from birth, but there are researchers who claim that [stem cell research](#) could lead to the creation of new eggs. If so, this would mean that infertile women, such as those who have entered the menopause, could be given new eggs.

New research questions theory

New studies done by researchers at the University of Gothenburg and Karolinska Institute now show that the dream of successfully treating infertility with stem cells will probably not be realised. These new research studies have been published in the renowned journal *Proceedings of the National Academy of Sciences (PNAS)*.

"Ever since 2004, the studies on stem cell research and infertility have been surrounded by hype. There has been a great amount of media interest in this, and the message has been that the treatment of infertility with stem cells is about to happen. However, many researchers, including my research group, have tried to replicate these studies and not succeeded. This creates uncertainty about whether it is at all possible to

create new eggs with the help of [stem cells](#)," says Kui Liu, a researcher at the Department of Chemistry and Molecular Biology at the University of Gothenburg.

Stem cell treatment unrealistic

Together with Outi Hovatta's research group at Karolinska Institute and Jan-Åke Gustafsson's research team at the University of Houston in the United States, staff at Professor Liu's laboratory have carried out experiments on mice showing that the only eggs female mice have are the ones they have from birth.

"This shows not only that the use of stem cell research in the clinical treatment of childlessness is unrealistic but also that clinics should focus on using the eggs that women have had since birth in treating [infertility](#)," says Professor Kui Liu.

More information: "Life-long in vivo cell-lineage tracing shows that no oogenesis originates from putative germline stem cells in adult mice." *PNAS* 2014 111 (50) 17983-17988; published ahead of print December 1, 2014, [DOI: 10.1073/pnas.1421047111](https://doi.org/10.1073/pnas.1421047111)

Provided by University of Gothenburg

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