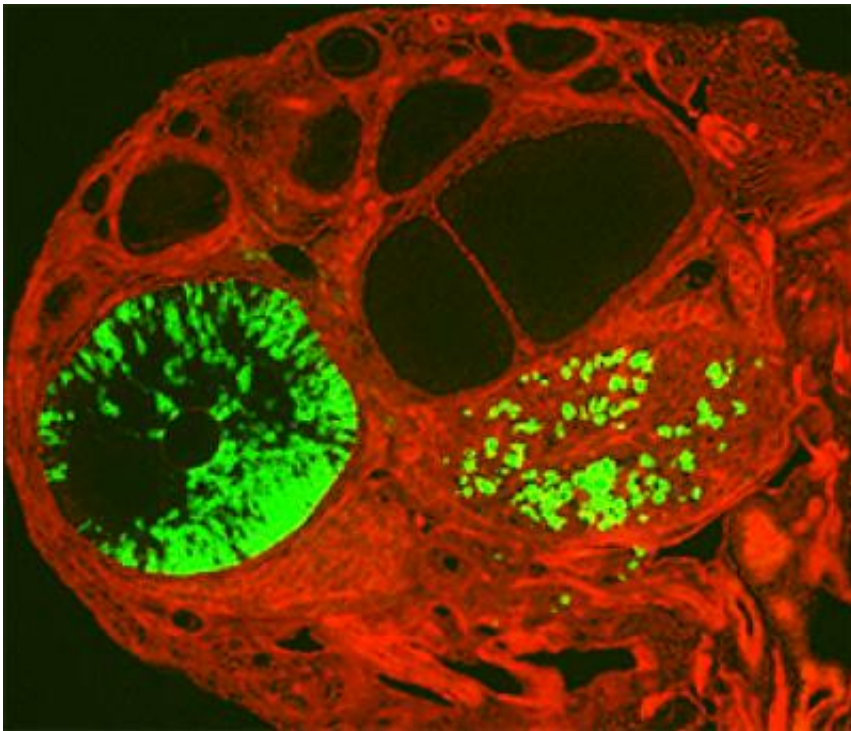


Different eggs in adolescent girls and adult women

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There are different eggs in adolescent girls and adult women. Credit: University of Gothenburg

Are the eggs produced by adolescent girls the same as the ones produced by adult women? A recent study published in *Human Molecular Genetics* by Professor Kui Liu from the University of Gothenburg in Sweden shows compelling evidence that there are two completely distinct types of eggs in the mammalian ovary – "the first wave" and "the adult wave".

Professor Liu's team used two genetically modified mouse models to show that the first wave of [eggs](#), which starts immediately after birth, contributes to the onset of puberty and provides fertilizable eggs into the transition from adolescence to adulthood. In contrast, the adult wave remains in a state of dormancy until activated during the adult life and then provides eggs throughout the entire reproductive lifespan.

This is the first time that the developmental dynamics of two distinct populations of eggs have been clearly described in an animal model, and there is evidence that these two waves of eggs most likely also exist in the human ovary. The identification and characterization of the two waves of eggs will lead to new ways of thinking about how to obtain the best eggs when treating women for ovarian diseases that cause infertility. Such techniques will prove especially useful for women suffering from premature ovarian failure (POF), which affects 1%–4% of all women of childbearing age. The results may also lead to more effective treatments for ovarian diseases by specifically targeting the different egg populations.

Dr. Liu is a professor at the Department of Chemistry and Molecular Biology, University of Gothenburg. His research group specializes in the development of female germ cells. His work in recent years has focused on translating the results from animal models into clinical techniques for treating female infertility.

Provided by University of Gothenburg

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