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## **Advancing fertility preservation: structural and functional insights into the human ovary**

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## List of publications

1. **Cheng H**, Wei F, Del Valle JS, Stolk THR, Huirne JA, Asseler JD, Pilgram GSK, Van Der Westerlaken LAJ, Van Mello NM, Chuva De Sousa Lopes SM. In vitro growth of secondary follicles from cryopreserved-thawed ovarian cortex. *Hum Reprod.* 2024 Dec 1;39(12):2743-2753. doi: 10.1093/humrep/deae240. PMID: 39435626; PMCID: PMC11630006.
2. Wei F, Fan X, Del Valle JS, Asseler JD, van der Meeren LE, **Cheng H**, Roelen BAJ, Louwe LA, Pilgram GSK, van der Westerlaken LAJ, van Mello NM, Chuva de Sousa Lopes SM. Classification of Atretic Small Antral Follicles in the Human Ovary. *Int J Mol Sci.* 2023 Nov 28;24(23):16846. doi: 10.3390/ijms242316846. PMID: 38069168; PMCID: PMC10706134.
3. de Koning R, Blikkendaal MD, de Sousa Lopes SMC, van der Meeren LE, **Cheng H**, Jansen FW, Lashley EELO. Histological analysis of (antral) follicle density in ovarian cortex tissue attached to stripped endometriomas. *J Assist Reprod Genet.* 2024 Apr;41(4):1067-1076. doi: 10.1007/s10815-024-03058-0. Epub 2024 Mar 5. PMID: 38438769; PMCID: PMC11052973.
4. **Cheng H**, Zhang J, Zhang S, Zhai Y, Jiang Y, An X, Ma X, Zhang X, Li Z, Tang B. Tet3 is required for normal in vitro fertilization preimplantation embryos development of bovine. *Mol Reprod Dev.* 2019 Mar;86(3):298-307. doi: 10.1002/mrd.23105. Epub 2019 Jan 20. PMID: 30624819.
5. **Cheng H**, Han Y, Zhang J, Zhang S, Zhai Y, An X, Li Q, Duan J, Zhang X, Li Z, Tang B, Shen H. Effects of dimethyl sulfoxide (DMSO) on DNA methylation and histone modification in parthenogenetically activated porcine embryos. *Reprod Fertil Dev.* 2022 May;34(8):598-607. doi: 10.1071/RD21083. PMID: 35397781.
6. **Cheng H**, Wang Y, Zhang J, Zhang S, Ma X, An X, Man X, Zhang X, Li Z, Tang B. Effects of PRDM14 Silencing on Parthenogenetically Activated Porcine Embryos. *Cell Reprogram.* 2018 Dec;20(6):382-388. doi: 10.1089/cell.2018.0029. Epub 2018 Oct 16. PMID: 30325654.

## **Curriculum vitae**

Hui Cheng was born on September 8, 1993, in Anhui, China. In 2012, she completed her high school education and enrolled in the School of Veterinary Medicine at Northeast Agricultural University in Harbin, China. In 2016, she obtained her Bachelor's degree in Agriculture, majoring in Animal Pharmacy. That same year, she began her Master's training in Anatomy and Embryology at the School of Basic Veterinary Medicine, Jilin University, in Changchun, China. In 2019, she was awarded her Master's degree with a research project entitled "Tet3 is required for normal in vitro fertilization preimplantation embryo development in bovine." After receiving funding for a four-year PhD abroad from the China Scholarship Council, she began her doctoral studies in October 2021 at the Department of Anatomy and Embryology, Leiden University Medical Center (LUMC), under the supervision of Prof. Susana M. Chuva de Sousa Lopes. Her PhD research focused on developing an in vitro model to recapitulate different stages of follicular growth. The aim of her project was to simulate in vivo follicular development by culturing ovarian cortical tissue in vitro and to investigate how the addition of different components influences follicle growth and oocyte maturation.