



Effects of high and low intrafollicular progesterone concentration on in vitro embryo production rate and follicular small extracellular vesicles during the same estrous cycle stage in bovine



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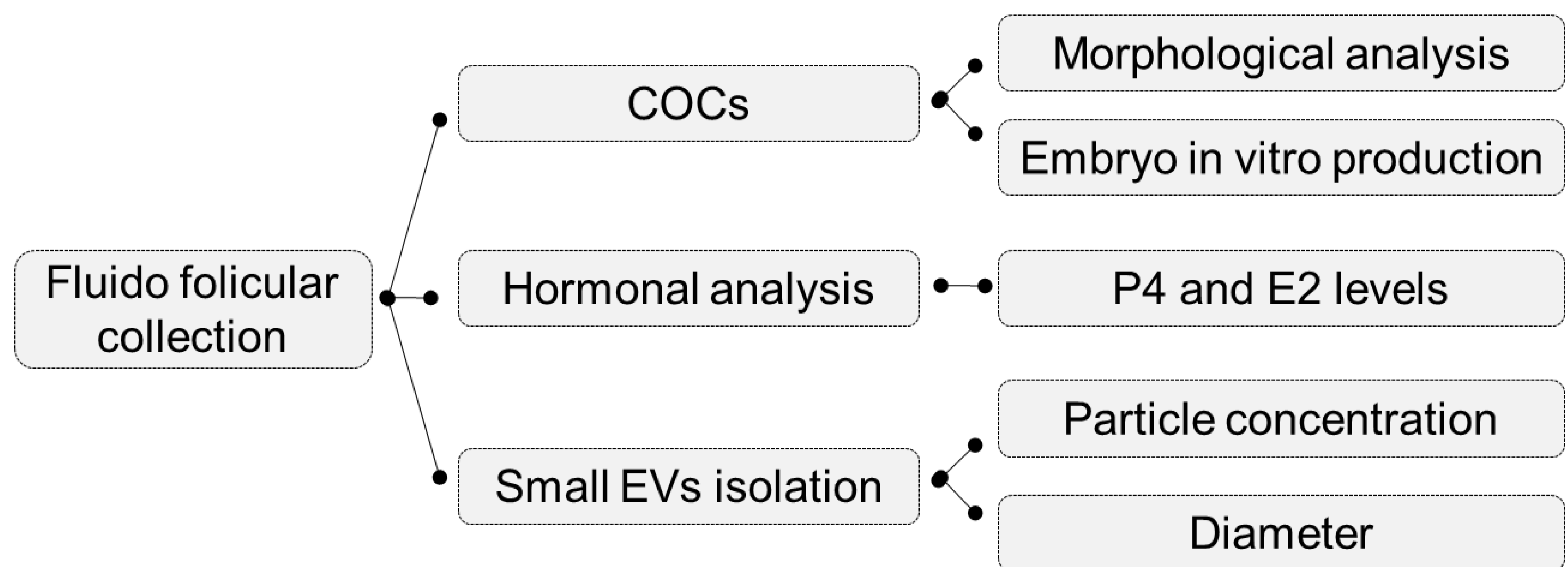
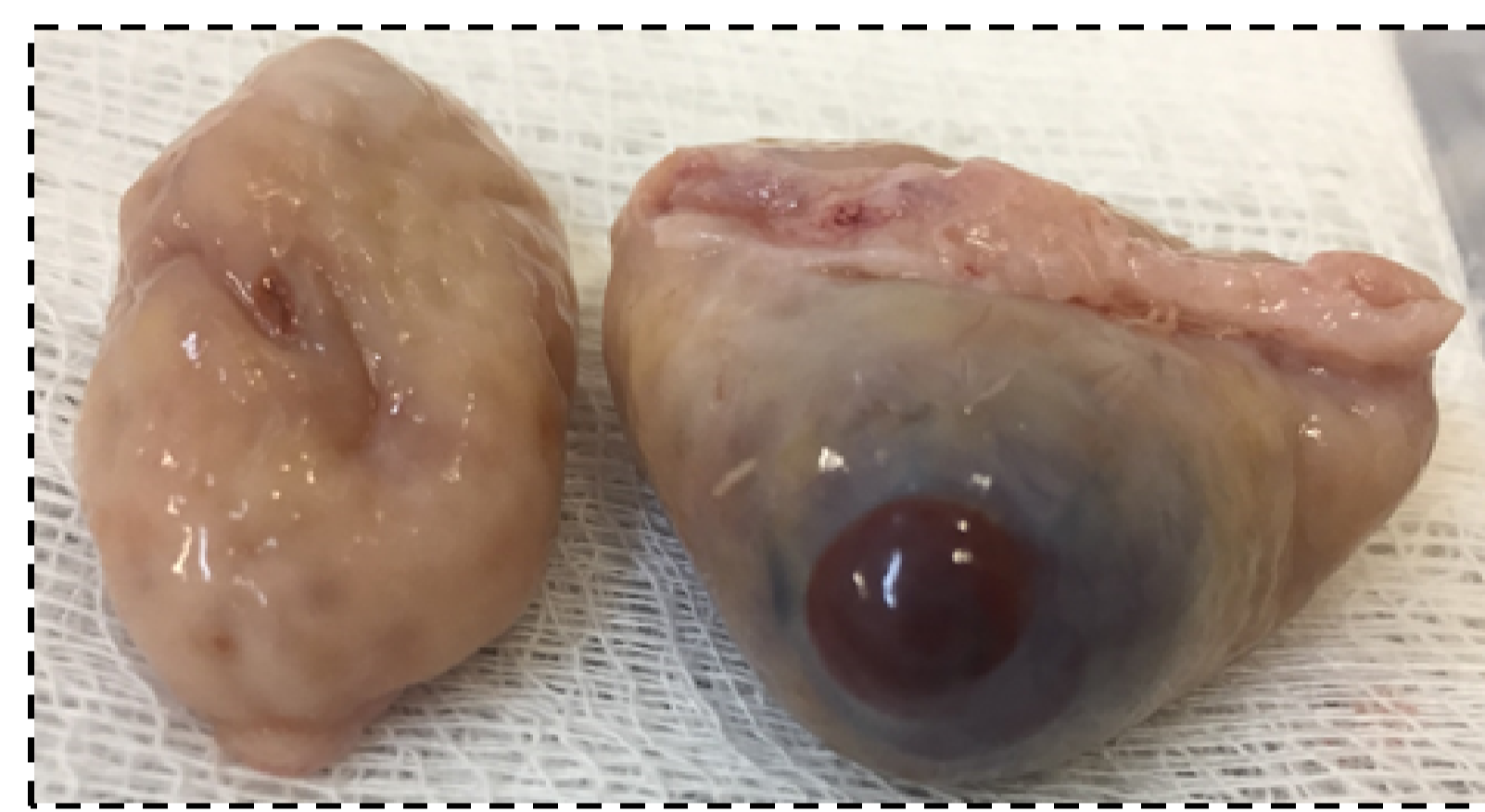
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INTRODUCTION

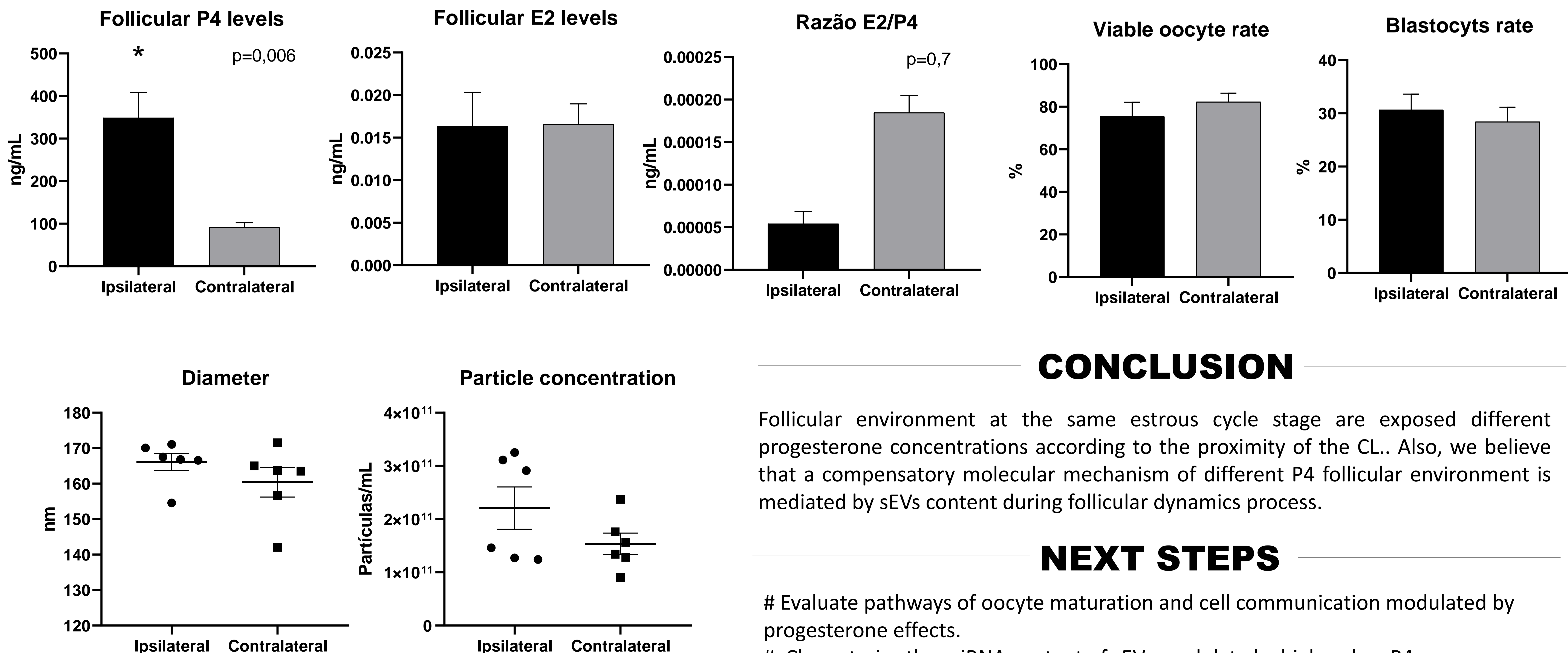
During follicular development, the ovarian follicle is exposed to different progesterone (P4) levels. At different stages of the estrous cycle, P4 levels modulate the contents of small extracellular vesicles (sEVs). These molecules are small nanoparticles that carry bioactive materials within biofluids such as follicular fluid (FF). Based on that, our hypothesis is that corpus luteum (CL) proximity attributes different intrafollicular P4 concentrations during the same stage of the estrous cycle, and this difference is capable to alter the sEVs profile and the in vitro-produced embryos rates.

MATERIAL AND METHODS



Statistical analysis were performed using Student *t*-test (GraphPad Prism) with a significance level of 5%.

RESULTS



CONCLUSION

Follicular environment at the same estrous cycle stage are exposed different progesterone concentrations according to the proximity of the CL. Also, we believe that a compensatory molecular mechanism of different P4 follicular environment is mediated by sEVs content during follicular dynamics process.

NEXT STEPS

- # Evaluate pathways of oocyte maturation and cell communication modulated by progesterone effects.
- # Characterize the miRNA content of sEVs modulate by high or low P4 concentrations caused by CL proximity.

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