Reproductive fluids added to embryo culture vs. standard culture in cow: first results on pregnancy rates

JS Lopes[1,2], M Hamdi[3], E Alcázar-Triviño[4], B Rodríguez-Alonso[3], A Canha-Gouveia[1,2], E París-Oller[1,2], C Soriano-Úbeda[1,2], S Cánovas[1,2], D Rizos[3], P Coy[1,2].

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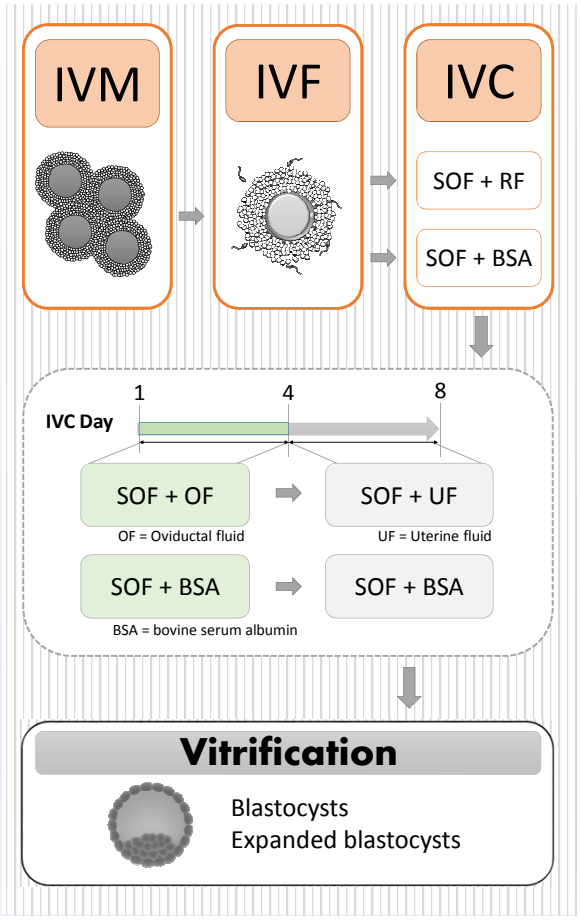
Introduction

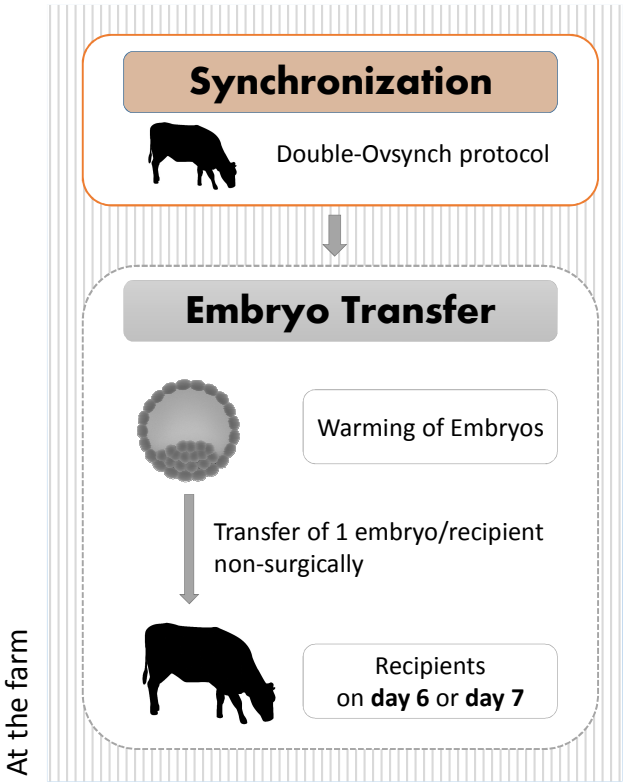
Reproductive fluids (RF) though being part of the natural enviroment of embryo development, are not yet included in current IVC media. It has been shown in bovine that inclusion of RF in embryo IVC produces blastocysts with higher quality[1]. In porcine, embryos produced with RF had gene expression and DNA methylation patterns closer to in vivo grown embryos[2].

Objective

To assess if the transfer of embryos cultured with RF (oviductal and uterine fluids) as supplement to IVC medium can give rise to pregnancies.

Materials&Methods





Results

Pregnancy (+)	Day 6*	Day 7*
SOF-RF	11.1%	36.8%
SOF-BSA	7.8%	33.3%
Total ET's	10.0% (n=30)	35.3% (n=34)

* p<0.05, when the variable is the day of the recipient

Conclusions

The presence of RF in embryo IVC gave rise to pregnancies at a similar level than control group, regardless of the recipient day. Day 6 recipients showed an adverse effect on pregnancy rates, regardless of the group. Further data (calves) are necessary to evaluate if the improvements reported at the blastocyst stage by including RF in bovine IVP are still evident after birth.

REFERENCES
1. Hamdi, Rep Fert Dev. RD17286, 2017
2. Cánovas, eLife. 6:e23670, 2017

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