

## ABSTRACT 126

**Replacement of Girolando herd with F1 embryo produced *in vitro* with oocytes from GYr and Holstein cows using sexed semen****Goulart, I.L.<sup>1</sup>; Ferreira, A.M.<sup>2</sup>; Camargo, L.S.A.<sup>2</sup>; Sinedino, L.D.P.<sup>1</sup>; Dourado, A.P.<sup>1</sup>; Nogueira, L.A.G.<sup>1</sup>**<sup>1</sup>Universidade Federal Fluminense, Niterói, RJ; <sup>2</sup>EMBRAPA Gado de Leite, Juiz de Fora, MG - Brasil

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Many researches have been developed to more efficient results in *in vitro* production (IVP) of bovine embryos. However, there are still many questions and few data on rates of embryonic death, higher birth weight and incidence of dystocia, mainly due to F1 embryos Girolando because of more concentration of studies in European and Zebu purebred. The objective of this study was to evaluate the feasibility of sexed semen in PIV of F1 (½ Holstein and ½ Gyr) bovine embryos in order to the herd replacement, the pregnancy rates obtained with the F1 embryos, to verify the ease of delivery of the recipients, the sex of the calf and survival time of 60 days. The experiment was conducted in commercial herds in the south region of the state of Rio de Janeiro, during the period of 2007 and 2008. Eight-one donor Gyr and 108 Holstein, all with regular estrous cycles, were selected and punctured. The embryos were produced in a commercial laboratory and transferred on day 7 to the cows of the own herds, used as recipients. The diagnoses of pregnancy and fetal sexing were performed 60 days after the transfers by palpation per rectum and transrectal ultrasonography. Statistical analysis were done using chi-square test. The pregnancy rate with F1 embryos produced with sexed semen was 41.9% and the mortality rate within 60 days of 9.7%, allowing the rate of annual replacement on 34%. Difficulties in receiving delivery were not observed, indicating no occurrence of the large offspring syndrome in F1 product. The weight of the calves was between 35 to 40 kg, with no congenital abnormalities in calves born, and we observed 90.2% of females. We conclude that it is feasible to standardize the Girolando herd using sexed semen in IVP of F1 embryos.

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**PREGNANCY AND EMBRYONIC LOSS RATES FROM RECIPIENT MARES TREATED WITH A NEW LONG-ACTING PROGESTERONE FORMULATION AND ALTERNATIVE PROTOCOLS****Greco, G.M.; Dell'aqua Jr., J.A.; Castro-Chaves, M.M.B.; Alvarenga, M.A.**

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At the beginning and end of the breeding season, the percentage of recipients showing normal estrous cycles is low, making synchronization less likely. Long-acting progesterone compounds containing 150mg/mL of progesterone have been weekly administered to acyclic mares, so they can be used as recipients. The objective of this study was to evaluate pregnancy and embryonic loss rates from acyclic recipients treated with a new long-acting progesterone formulation, produced in our laboratory, containing 300mg/mL of progesterone (P4LA300) and to determine whether alternative treatment protocols can be used in cyclic recipients. Recipients were classified according to their reproductive status. G1: Acyclic mares (n=193) showing endometrial edema 2 days after treatment with 5mg (I.M.) of estradiol benzoate (Estrogin®, Farmavet, São Paulo, Brazil) were injected with 10mL (I.M.) of P4LA300. Embryos were transferred 4 to 10 days after progesterone, when 5mL (I.M.) of P4LA300 were administered. Pregnant recipients received 10mL (I.M.) of P4LA300 every 2 weeks until fetuses reached 110 days. G2: Cyclic mares (n=28) showing a follicle e"35 mm and endometrial edema were treated with 2.500UI (I.V.) of hCG (Vetecor®, Hertape Calier, Minas Gerais, Brazil) and 10mL (I.M.) of P4LA300. Embryos were transferred 4 days after treatment and progesterone injections, as for G1, were discontinued if pregnant recipients were ovulated at the day of transfer. G3: Diestrous mares (n=48) at D5 to D14, showing endometrial edema 2 days after I.M. treatment with 5mg of estradiol benzoate and 5mg of dinoprost tromethamine (Lutalyse®, Pfizer, São Paulo, Brazil) received 10mL (I.M.) of P4LA300. Embryos were transferred 4 to 10 days after progesterone injection, when 5mL (I.M.) of P4LA300 were administered. Pregnant recipients were treated as G1. G4: Cyclic mares (n=267) receiving embryos between D4 and D8. Pregnancy at 15 days and embryonic loss rates at 60 days were evaluated through Fisher's exact tests, being similar between groups, of, respectively, 71.50% (138/193) and 8.70% (12/138) in G1; 67.86% (19/28) and 5.26% (1/19) in G2; 56.82% (25/44) and 8.0% (2/25) in G3 and 67.42% (180/267) and 10% (18/180) in G4. 71.43% (20/28) of G2 recipients were ovulated at the day of transfer and 75% (15/20) became pregnant. From the remaining that did not ovulate (28.57%; 8/20), 50% (4/8) were pregnant and one suffered embryonic loss. P4LA300 treatment, every 2 weeks, was effective in maintaining pregnancy of acyclic and cyclic recipients, reducing overall injections and allowing transfers until the 10<sup>th</sup> day post-injection. This is the first study that demonstrates the use of progesterone-treated cyclic recipients, in estrous or following an artificially-interrupted diestrous.