



A100 OPU-IVP and ET

**Effect of FSH and/ or rBST treatment on IVEP of Holstein calves (4 to 9 months of age)**

**F.M. Elliff<sup>1</sup>, B.M. Bayeux<sup>1</sup>, R.D. Mingoti<sup>1</sup>, M.H.A. Colli<sup>1</sup>, L.G. Silva<sup>1</sup>, G.D. Melo<sup>1</sup>, G. Gomes<sup>1</sup>,  
F.P. Rennó<sup>1</sup>, Y.F. Watanabe<sup>2</sup>, P.S. Baruselli<sup>1</sup>**

<sup>1</sup>USP - Universidade de São Paulo, São Paulo, SP, Brasil; <sup>2</sup>VITROGEN, Cravinhos, SP, Brasil.

The aim of the present study was to evaluate the effect of FSH and/or rBST treatment on IVEP of Holstein calves (*Bos Taurus*). A total of 27 Holstein females were used, in which 22 were prepubertal and 5 pubertal. The prepubertal animals were distributed into four groups: Control group: (CTLG, n=6); Treated only with rBST group (BSTG, n=5); Treated only with FSH group (FSHG, n=6); and Treated with rBST and FSH (rBST+FSHG, n=5). The pubertal heifers (PHG) were included as a positive control for the laboratory. All the animals received a norgestomet auricular device (Crestar®, MSD Saúde Animal, São Paulo, SP, Brazil) and 1 mg IM of estradiol benzoate (Fertilcare Sincronização®, MSD Saúde Animal) at the onset of the protocol (D0). The animals of CTLG group received no additional treatment. The animals of BSTG received 500 mg IM of rBST (Boostin®, MSD Saúde Animal) on day -2 (D-2). The animals of FSHG received 140 mg IM of FSH (Folltropin®, Agener União – Saúde Animal, São Paulo, SP, Brazil), performed in four injection twice a day on decreasing doses (40 mg [day 4 PM], 40 mg [day 5, AM], 30 mg [day 5, PM], and 30 mg [day 6, AM]; coasting period of 24 hours). The animals of BST+FSHG received 500 mg IM of rBST on D-2 and the same FSH treatment protocol mentioned above. The Heifers of PHG were not treated with any additional treatment. On day 7 the auricular devices were removed and the animals of all groups were submitted to an epidural anesthesia (2% lidocaine) followed by ovum pick-up guided by transvaginal ultrasound (guide EC9-5 Heifer, WTA, Cravinhos, SP; ultrasound S8®, SonoScape, China). The recovered oocytes were sent to an IVEP commercial lab, and the embryonic development (cleavage and blastocyst rates) evaluation were performed. The oocytes were fertilized with sexed semen from two Holstein bulls (*Bos Taurus*). The obtained data were analyzed by the GLIMIX procedure of SAS®. No statistical differences were found between groups on number of blastocysts (P=0.7), number of cleaved oocytes (P=0.57), total recovered oocytes (P=0.11), blastocyst rates (on total oocytes, P=0.36) and cleavage rate (on total oocytes, P=0.3). On day 7 the FSHG group had more (P=0.006) medium follicles (14.2±3.09a) than BSTG, CTLG and PHG (1.1±1.20b; 1.5±1.18b e 1.3±1.16b, respectively) and the BST+FSHG had more (P=0.002) large follicles (2.5±0.67a) than the CTLG (0.1±0.31b). The BSTG oocytes recovery rate was lower (P=0.01) than CTLG (55.0%a vs. 70.2%b, respectively). The number of viable oocytes was greater (P=0.03) on FSHG (14.6±0.28a) than BSTG group (3.2±0.25b). Apparently, treatment with FSH, rBST or the association of both treatments had no influence on IVEP in this animal category; however, further studies with greater number of animals should be done in order to conclude these results.

Acknowledgements: CAPES; Bovigenese; WTA; Vitrogen; Laboratório de Pesquisa em Bovinos de Leite (USP).