

Endometrial estrogen receptor alpha expression in susceptible mares to endometritis treated with an immunomodulator after experimental infection.
Preliminary results

Acuña, S¹; Fumuso, E²; D'Anatro, G¹; Rivulgo, M²; Alzola, R²; Felipe, A²;
Tasende, C¹

¹Facultad de Veterinaria, Uruguay;

²Facultad de Ciencias Veterinarias, U.N.C.P.B.A., Argentina

The effect of intrauterine treatment with an immunomodulator (cell wall of *Mycobacterium phlei*, MCC) on the endometrial estrogen receptor alpha (ERa) expression after experimental infection with *Streptococcus zooepidemicus* was investigated in susceptible mares to endometritis (SME). Nine SME were infected 24 h after oestrous detection by ultrasound (ovarian follicles >29mm, folds and endometrial oedema). The endometritis was confirmed by presence of intrauterine fluid by ultrasound, culture and exfoliative cytology. Four mares were treated with MCC 24 h after infection (treated mares) and five mares were not treated (control mares). In all mares, endometrial biopsies were taken in the same four moments of oestrous cycle: at estrous (E); 24 h post-infection (24hPI); at ovulation (Ov) and on day 7 post ovulation (d7POv). The immunoperoxidase technique was used to determine ERa expression. The immunostaining was analyzed by ANOVA test. The level of significance considered was $P < 0.05$. In all mares (treated and controls), ERa immunostaining was the highest in E and decreased after infection (E vs. 24hPI). In Control mares, ERa immunostaining was higher in Ov than in 24hPI and d7POv while in MCC treated mares was not different. The higher ERa immunostaining in E agrees with the known up-regulation exerted by estrogens on ERa expression at estrous. The ERa immunostaining found showed different pattern in Ov after MCC treatment (treated vs. control mares) suggesting that the immunomodulator may modify endometrial ERa expression in mares susceptible to endometritis at the moment of the ovulation.

Key words: estrogen receptor, endometritis, immunomodulator.