

VEGF Concentrations Levels in Bovine Ovulatory Follicles after Prostaglandin Treatment

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Abstract: The aim of this study was to evaluate variations in the bovine follicular VEGF concentrations 72 hours after a double prostaglandin synchronisation treatment. The experiment was performed on 17 multiparous Italian Friesian dairy cows which were at least 90 days post-calving. The follicular fluid was collected from the dominant follicles under ultrasound guidance. The ratio between the progesterone and estrogen follicular fluid concentrations were used to allow into active and nonactive estrogen follicles. The average VEGF follicular concentrations were significantly different ($P < 0.05$) between the two groups. Moreover, the follicular NEFA levels increased significantly ($P < 0.01$) in the nonestrogen active group, while its IGF-I concentrations were significantly lower ($P < 0.05$). Our data suggest that follicular VEGF and NEFA, as well as IGF-I, may play a key role in bovine follicle growth and could be valuable biochemical markers of oocyte maturation.