

Expression and Cloning of Estradiol Receptor alpha and Progesterone Receptors and Interferone Stimulated Gene 15 in Endometrium and Corpus Luteum of Pregnant Camel

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ABSTRACT

Despite their economic and cultural importance, dromedary camel is considered as a slow breeding animal, due to the higher incidence of early embryonic death. The present study was designed to investigate: (1) Expression and cloning of progesterone receptors (PR) and estradiol receptor alpha (ER α) in CL and endometrium of pregnant camel; (2) Detection of interferon stimulated gene 15 (ISG 15) in corpus luteum (CL) and endometrium of pregnant dromedary. For PR and ER α , RNA was extracted from CL and endometrium of dromedary during early (1-3 months), mid (4 to 9 months) and late stage (10 to 13 months) of pregnancy. mRNA expression of PR and ER α was performed using. ISG15 detection was performed using immunohistochemistry and western blot analysis. In CL, both PR and ER α showed the same pattern with significantly high (P <0.01) expression during early stage compared to mid or late stages of pregnancy. The lowest (P < 0.01) expression was detected during the late stage of pregnancy compared with the mid stage. There was no difference in mRNA expression for PR and ER α in endometrium during the different stages of pregnancy. ISG 15 conjugated protein showed no expression in CL or endometrium of pregnant dromedary either by immunohistochemistry or western blot. In conclusion, PR and ER α potentially play a role in regulating luteal function in CL during pregnancy in dromedary camel, further work is necessary to study the mechanism of pregnancy recognition in dromedary camel.