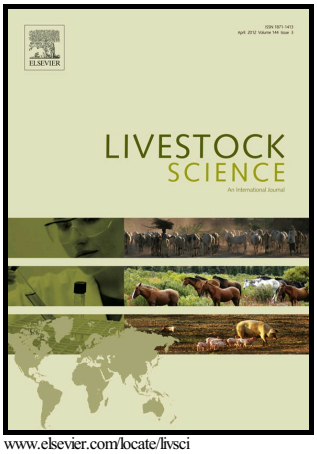

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In vivo effects of GnRH on expression of interleukin 1 (IL-1) system members in bovine preovulatory follicles and the influence of IL-1β on cumulus-oocyte complexes cultured *in vitro*☆

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Abstract

The purpose of this study was to determine the effects of *in vivo* GnRH treatment on mRNA expression of *IL-1β* system in bovine granulosa cells from preovulatory follicles and to analyze the *in vitro* effect of gonadotropins on the *IL-1β* system gene expression in cumulus cells. Moreover, the additive effect of IL-1β on cumulus expansion, gene expression and ultrastructural integrity of COCs cultured *in vitro* was evaluated. *In vivo* studies in granulosa cells demonstrated that *IL-1RA* mRNA levels were increased after 24 h of GnRH treatment. Similarly, the presence of gonadotropins increased the levels of mRNAs for *IL-1R1* and *IL-*

☆ **IL-1β and preovulatory follicle development**