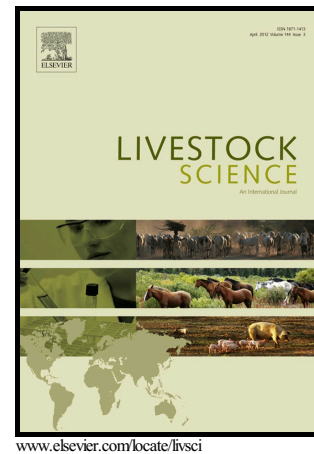


In vivo effects of GnRH on expression of interleukin 1 (IL-1) system members in bovine preovulatory follicles and the influence of IL-1 β on cumulus-oocyte complexes cultured *in vitro*

A.W.B. Silva, J.R.S. Passos, A.M.P. Dau, M.P. De Cesaro, J.G. Ferst, J. Tonello dos Santos, F.T.G. Bezerra, J.J.N. Costa, L.R.F.M. Paulino, M.A.M. Donato, C.A. Peixoto, P.B.D. Gonçalves, J.R.V. Silva



PII: S1871-1413(17)30330-X
DOI: <https://doi.org/10.1016/j.livsci.2017.11.002>
Reference: LIVSCI3340

To appear in: *Livestock Science*

Received date: 14 December 2016
Revised date: 26 October 2017
Accepted date: 1 November 2017

Cite this article as: A.W.B. Silva, J.R.S. Passos, A.M.P. Dau, M.P. De Cesaro, J.G. Ferst, J. Tonello dos Santos, F.T.G. Bezerra, J.J.N. Costa, L.R.F.M. Paulino, M.A.M. Donato, C.A. Peixoto, P.B.D. Gonçalves and J.R.V. Silva, *In vivo* effects of GnRH on expression of interleukin 1 (IL-1) system members in bovine preovulatory follicles and the influence of IL-1 β on cumulus-oocyte complexes cultured *in vitro*, *Livestock Science*, <https://doi.org/10.1016/j.livsci.2017.11.002>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting galley proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

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

A.W.B. Silva^a, J.R.S. Passos^a, A.M.P., Dau^b, M.P. De Cesaro^b, J.G. Ferst^b, J. Tonellotto dos Santos^b, F.T.G. Bezerra^a, J.J.N. Costa^a, L.R.F. M., Paulino^a, M.A.M., Donato^c, C.A. Peixoto^c, P.B.D. Gonçalves^b, J.R.V. Silva^{a*}

^aBiotechnology Nucleus of Sobral - NUBIS, Federal University of Ceara, Sobral, CE, Brazil.

^bLaboratory of Biotechnology and Animal Reproduction - BioRep, Federal University of Santa Maria, Santa Maria, RS, Brazil.

^cLaboratory of Ultrastructure, CPqAM/FIOCRUZ, Federal University of Pernambuco, Recife-PE, Brazil.

*Corresponding address (J. R. V. Silva): Biotechnology Nucleus of Sobral - NUBIS, Federal University of Ceara, Av. Comandante Maurocéllo Rocha Ponte 100, CEP 62041-040, Sobral, CE, Brazil. Phone / Fax: +55 88 36118000 [jrvsilva@ufc.br]

Abstract

The purpose of this study was to determine the effects of *in vivo* GnRH treatment on mRNA expression of *IL-1 β* system in bovine granulosa cells from preovulatory follicles and to analyze the *in vitro* effect of gonadotropins on the *IL-1 β* system gene expression in cumulus cells. Moreover, the additive effect of IL-1 β 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-1RI* and *IL-*

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

Download English Version:

<https://daneshyari.com/en/article/8502111>

Download Persian Version:

<https://daneshyari.com/article/8502111>

[Daneshyari.com](https://daneshyari.com)