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EFFECTS OF ANTIOXIDANT TREATMENT ON CELL DIFFERENTIATION IN RABBIT EMBRYOS

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Abstract

The antioxidant coenzyme Q10 can influence the expression of genes involved in apoptosis and energy metabolism of oocytes and quercetin can improve oocyte maturation and early embryonic development. In this study, the gene expression of *GATA6* and *NANOG* in rabbit embryos was assessed using the qRT-PCR reaction. The groups were: group A- control group (no treatment added), group B (hormonal treatment of superovulation, which included the administration of PMSG and hCG), group C (administration of quercetin) and group D (administration of Coenzyme Q10). Our results show that the expression of the two genes was different depending on both the stage of embryonic development and the treatment administered. The highest values of gene expression for *GATA6* and *NANOG* were obtained in groups 2, 4, 7, 8 and 9, corresponding to morula and blastocyst stages. In addition to the fact that *NANOG* and *GATA6* are factors that are involved in early embryonic development, we believe that the administration of extrapituitary gonadotropins and antioxidants contributed to the increase in gene expression.

Key words: rabbit embryos, gene expression, antioxidants, qR-PCR
