

## RELATIONSHIP BETWEEN CORPUS LUTEUM AND POSSIBILITY DAIRY COWS OOCYTES TO MATURATION *IN VITRO*

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**Abstract.** The aim of this study was to investigate the effects of corpus luteum (CL) on the developmental potential of cows oocytes. The ovaries of dairy cows were cut out immediately after slaughter and transported within one hour. After ovarian classification based on presence or absence of CL. We selected follicles which diameter, were medium (6-9 mm). Quality grading (A, B) of the oocytes was performed on the basis of cumulus cell development and homogeneity of cytoplasm according to Chaubal et al. (2006). A total of 125 COCs were aspirated from 124 ovaries. Among 72 COCs were aspirated of ovaries presence of CL, and 53 COCs absence of CL. Only Grade A and B oocytes COCs were used for maturation. A higher percentage of oocytes was collected from medium size follicles of ovaries with presence of corpus luteum (34.15 percent) than absence of corpus luteum ( $p<0.05$ ). In ovaries group with presence of CL, COCs matured 84.72 percent (Grade A and B). In ovaries group with absence of CL, COCs matured 64.15 percent (Grade A and B). A significant difference was detected between the presence and absence of CL group ( $p<0.05$ ).

**Keywords:** IVF, oocytes, cumulus cells, maturation.