



Expression characteristics of MMP-2 and MMP-9 in guinea pig ovaries during the estrous cycle

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ABSTRACT. We investigated the expression characteristics of matrix metalloproteinases (MMP)-2 and MMP-9 in the ovaries of normal adult guinea pigs during the estrous cycle. The estrous cycle was classified according to the appearance of the vaginal orifice and by vaginal exfoliated cell smears. Guinea pigs that had experienced at least two normal estrous cycles were selected. Ovaries were collected from guinea pigs at proestrus or metestrus (N = 6). The expression characteristics of steroidogenic acute regulatory protein (StAR), MMP-2, and MMP-9 were investigated by hematoxylin and eosin staining and immunohistochemical staining. The results showed that MMP-2, MMP-9, and StAR were significantly expressed in the granulosa and thecal cells of the ovarian atretic follicles during proestrus, and were strongly expressed in the corpus luteum during metestrus.

Key words: Guinea pigs; Ovary; MMP-2; MMP-9; StAR