

**P-56** Expression of Membrane-Type Matrix Metalloproteinase 1 (MT1-MMP) and 2 (MT2-MMP) in Human Granulosa Cells of Preovulatory Follicles

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During its growth and periovulatory period, a mammalian follicle undergoes extensive remodeling. While FSH and LH are the main hormonal inducers of the events, many factors are known to be involved in the process of remodeling. Membrane-type matrix metalloproteinases (MT-MMP) are the enzymes which are located in cell membrane and proteolytically digest many extracellular matrix components and cleave other secretory pro-MMPs to make them active. Due to these activities, MT-MMPs are known to play important roles in the mechanisms of differentiation, tissue remodeling and cancerous invasion of various tissues. In this study, expressions of MT1- and MT2-MMP are examined with regards to their possible role in the late follicular growth in human. By using RT-PCR technique, granulosa cells (GC) obtained from either large follicles (>18 mm) or small follicles (<18 mm) were shown to contain mRNAs of both MT1- and MT2-MMP. However, mRNA expressions of MT3- and MT4-MMP were barely seen regardless of the size of follicles. When the protein expression patterns of both MT1- and MT2-MMP were examined using their specific antibodies, both proteins were detected after western blotting. Interestingly, the intensities of both protein bands obtained from the GC of small follicles appeared to be much stronger than those from the GC of larger follicles. Moreover the band intensity of MT2-MMP was stronger than that of MT1-MMP. From these observations, it is suggested that MT1- and MT2-MMPs possibly involved in tissue remodeling during late follicular growth in human.

**P-57** Expression of Membrane-Type Matrix Metalloproteinase 1 (MT1-MMP) and 2 (MT2-MMP) in Mouse Cycling and Preimplantation Uteri

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To see if MT-MMPs might be involved in tissue remodeling of uterus during estrous cycle and preimplantation period in mouse, expression patterns of both MT1-MMP and MT2-MMP were investigated using RT-PCR and western blotting techniques. Expression of both mRNAs of MT1- and MT2-MMP were observed throughout the estrous cycles, namely proestrus, estrus, metestrus and diestrus. The expression of MT1-MMP protein having molecular weight of 55 kDa was also observed throughout the estrous cycle in oviductal tissue homogenates of each estrous stage that