## 108. EXPRESSION OF PROPROTEIN CONVERTASE(PC) 6 IN HUMAN AND RHESUS MONKEY ENDOMETRIUM

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Proprotein convertase (PC) 6 is a member of the serine protease family processing molecules from precursors to bioactive forms. PC6 expression has been identified in mouse endometrium (1). It is upregulated during decidualization at the site of implantation. We hypothesized that the expression of PC6 in decidualizing cells is critical for implantation through activating regulatory molecules including cytokines important for the event. The present work aimed to establish the spatial and temporal cellular expression of both PC6 mRNA and protein in human and rhesus monkey endometria across the menstrual/oestrous cycles respectively and at the implantation sites during early pregnancy. In situ hybridisation was performed using a digoxygenin (DIG)-labelled cDNA probe against human PC6. For immunohistochemistry, a polyclonal rabbit anti-mouse PC6 antibody (Alexis US) was applied to sections and binding was visualized using the Strept ABC HRP kit (Dako Denmark). Both PC6 mRNA and protein were localized in the same cells predominantly in luminal and glandular epithelia during the proliferative phase of the cycle. During the secretory phase and in early pregnancy, PC6 expression was predominantly localized in decidualizing cells or in the decidua adjacent to implantation sites. The staining patterns were consistent between human and monkey tissues. It is proposed that PC6 plays a role in decidualization and implantation in human and rhesus monkey as in the mouse. It will be important to establish the functional role of PC6 in the uterus. Its manipulation may provide a mechanism for regulating fertility in infertile women or, in post-coital contraception. (1) Nie et al. (2003) Biol. Reprod. 68: 439-447.