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### Abstracts

#### Guest Editors:

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#### 251 Penetration of the Basal Lamina by Processes of Uterine Epithelial Cells Precedes Trophoblast Invasion during Implantation in the Rabbit

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The basal lamina (BL) of the uterine epithelium is usually thought to provide some kind of barrier for trophoblast invasion, since previous reports on its ultrastructure have suggested that the trophoblast stops here temporarily during embryo implantation (Schlafke and Enders, 1975). This view is not supported by data from a study of mesometrial implantation (chorioallantoic placenta) in the rabbit as reported here, showing that basal processes of uterine epithelial cells penetrate their own BL even before the trophoblast arrives. Rabbit uteri were fixed by perfusion with 2.5% glutaraldehyde/2% formaldehyde at the non-pregnant state and at 8 days post coitum (d.p.c.) and were processed for routine TEM. In the non-pregnant state the uterine epithelium shows a continuous and well-developed BL with lamina densa and lamina lucida. In contrast, at 8 d.p.c., half a day before the trophoblast starts to invade the endometrium of the placental folds, the BL becomes discontinuous, and BL residues are being penetrated by processes of uterine epithelium. In blastocyst-free segments, on the other hand, such a penetration does not occur but rather a massive accumulation of amorphous matrix material is observed. The described penetration of the BL by processes of the uterine epithelium at the placental folds suggests that changes in the cell-biological state of the endometrium play a more important role than any direct erosion by the trophoblast in this process.

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