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ABSTRACTS

CELL-CELL COMMUNICATION VIA GAP JUNCTIONS IN RABBIT UTERINE EPITHELIUM RELATED TO IMPLANTATION

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During the preimplantation phase the blastocyst becomes immobilized in the uterus so that an implantation chamber is formed.
In this chamber an interaction between embryo and uterine epithelium is initiated which leads to epithelial specialization concerning in particular the membrane differentiation.
As shown by freeze-fracture replicas at day seven of pregnancy the lateral membranes exhibit a considerable number of gap junctions.
By iontophoretic injections of the fluorescent dye Lucifer yellow in the uterine epithelial cells we demonstrate intercellular spreading of the dye via gap junctions. These results give evidence for a communication pathway via open gap junction channels. Increased cell-cell communication is found exclusively in the implantation chamber and not in the blastocyst-free segments of the same uterus.
This phenomenon may be a preparatory step to the following event of uterine epithelial cell fusion forming large symplasms at day 8 and 9 of pregnancy.

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