FOURTH INTERNATIONAL CONGRESS OF CELL BIOLOGY
ABSTRACT FORM

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POSTER TOPIC: 6.5

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1.1

[illegible]

MEMBRANE CHANGES OF UTERINE EPITHELIUM IN PREPARATION FOR TROPHOBLAST ATTACHMENT AS INDICATED BY MEMBRANE-BOUND ENZYMES

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It is generally postulated that membrane changes of uterine epithelial cells are an essential element of steroid-controlled 'receptivity' for trophoblast adhesion and invasion, but these membrane changes are very incompletely understood in molecular terms. We have studied marker enzymes for apical plasma membrane domains (alkaline phosphatase, aminopeptidase M, γ-glutamyl transferase and dipeptidyl peptidase IV) in the rabbit uterine epithelium during early pregnancy and pseudopregnancy (3-9 days post coitum, d p.c. resp. post hCG injection, p. hCG) with histochemical and immunohistochemical methods. The main activity of these enzymes was detected at 5 d p.c./ p. hCG and was followed by a considerable decrease at about implantation time (7-8 d p.c.). The light microscopical investigations were confirmed with electron microscopical immunohistochemistry using a monoclonal antibody against aminopeptidase M and histochemistry for alkaline phosphatase by a cerium method. Marker proteins of basolateral membrane domains are being investigated at present and the supplemental results will be presented. Our study suggests that changes occurring at the uterine epithelial membrane involve numerous integral membrane proteins not obviously related to trophoblast adhesion and are thus much more substantial than previously assumed.

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