

Annual meeting of the

# Deutsche Gesellschaft für Zellbiologie

Symposia

Microtubules: Dynamics, Regulation and Motility — Peptide Hormones —  
Oncogenes and Differentiation — The Endothelial Cell

Workshops

Dynamics of the Cytoskeleton — Differentiation of Stem Cells — Cell Culture  
Technology — Cell Cycle Controls — Video Microscopy and Laser Scanning  
Microscopy in Cell Biology — Cell Surface and Malignant Transformation —  
Nuclearcytoplasmic Transport of Macromolecules — The Neuron as a Secretory Cell  
— Inflammation

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## ABSTRACTS

### 27 Histochemical studies on an endometrial in vitro model for embryo implantation in the rabbit

I. Classen-Linke, J. Friedrich<sup>1</sup>, U. Giesen<sup>1</sup> and H.-W. Denker<sup>1</sup>, Institut für Anatomie der RWTH Aachen, D-5100 Aachen/FRG <sup>1</sup>(Present address: Institut für Anatomie, Universitätsklinikum, D-4300 Essen/FRG) In a previously described organ culture system (Denker et al., Anat.Anz. 156, 142, 1984) fragments of endometrium consisting of epithelium and stroma are obtained at different stages of early pseudopregnancy or at the non-pregnant state and are cultured on a gyratory shaker for several days with and without substitution of progesterone. The system is being used for confrontation experiments with rabbit blastocysts in order to study the relevance of cell surface molecules in the attachment phase of implantation (Hohn and Denker, Eur.J.Cell Biol., Suppl. 7, Vol. 36, 28, 1985).

In order to obtain more data about the degree of differentiation of the uterine epithelium in this in vitro model we compared apical plasma membrane-bound enzymes, the lectin binding patterns and progesterone receptor localization with the reaction found in vivo, using histochemical methods. Best imitation of in vivo patterns was achieved with explantation at 5 days after hCG injection and culturing for 2 - 4 days. Lectin binding to the uterine epithelium tended to decrease continuously during culture, although binding of e.g. RCA I was still moderate after two days. Lectin binding was lowest at the flat, regenerating part of the epithelium but was much better preserved at the original, higher epithelium. With respect to apical localization of enzymes, it was shown for dipeptidyl peptidase IV, alkaline phosphatase, and  $\gamma$ -glutamyl transferase, but not for aminopeptidase M that it is possible with this organ culture model to maintain a polarized state of the epithelium for at least two days, i.e. the time used for confrontation with rabbit blastocysts.

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