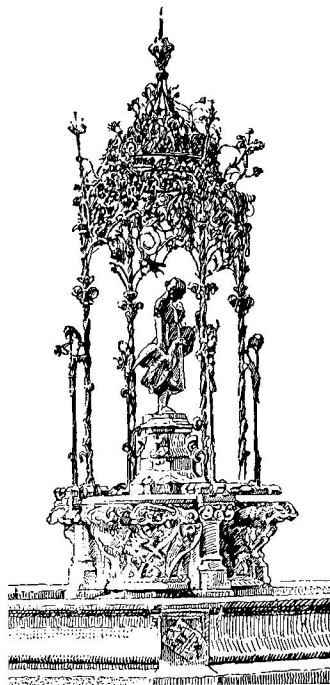

International Symposium
LECTINS AND GLYCOCONJUGATES IN ONCOLOGY

Structure, Function, Clinical Application

Göttingen / FR Germany, 4–5 December 1987



Under the auspices of the AIO (Association of Medical Oncology) and the
SEK (Section Experimental Oncology) of the German Cancer Society,
Max-Planck-Institute for Experimental Medicine,
Clinical Research Groups of the MPG Göttingen,
German Cancer Research Centre (DKFZ)

**FIRST ANNOUNCEMENT
CALL FOR PAPERS**

**LECTIN HISTOCHEMICAL EVALUATION OF AN IN-VITRO
MODEL FOR TROPHOBLAST INVASION**

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During trophoblast invasion at embryo implantation close membrane contacts are formed between trophoblast and endometrial cells for which cell surface-bound carbohydrates may be important. Implantation is thought to be possible only if the endometrium has entered a state of "receptivity" which is controlled by steroid hormones. The cell biological basis of this specific state is still poorly understood. We have proposed a three dimensional in-vitro culture model (Hohn et al.: Eur.J.Cell Biol. 33 (Suppl.5)17,1984) which allows confrontation of invasive cells including trophoblast with endometrium and subsequent attachment and invasion.

Endometrial fragments of about 1 mm in diameter were explanted from rabbits at day 5 of pseudopregnancy and cultured on a gyratory shaker for 26 days. Samples were taken every second day and processed for subsequent light and electron microscopical examination and lectin binding studies. Results were compared with the corresponding stages in vivo. 8 different FITC-labelled lectins (WGA, DBA, SBA, PNA, RCA-I, UEA, GS-IB₄, LPA) were included in this series. Lectin binding properties of the invasive trophoblast differ from those of the uterine epithelium. Very pronounced changes in binding patterns are found at the surface of the uterine epithelium during preimplantation phases of pregnancy and pseudopregnancy versus implantation phases, in vivo, and will be described in detail. They are compared with the patterns seen in the in vitro culture system. It is concluded that the "receptive state" for invasion may be characterized by considerable modification of carbohydrate-binding sites in vivo and in vitro. (Supported by DFG grant Ho 1059/1-7 and De 181/9-6)