214 The Localization of Fibronectin on the Rat Endometrium during Estrus and Pregnancy. H. Oiyama, H. Matsunaga, M. Hayashi, T. Okura, Y. Yaoi, Dept. Obst. and Gynec. Koshigaya Hosp. of Dokkyo Med. Coll. Saitama.

The rat endometrium during estrus and pregnancy was used as a model system to study fibronectin (F.N.) in vivo. F.N. distribution was determined by indirect immunoflluorecence staing. During estrus F.N. was prominent on the surface of fibrobrast in the endometrial stroma and around blood vessel. F.N. was also present in the basement menbrane region of the stromal-epiterium junction but absent in the epitherium. Early stage of pregnancy F.N. was still found around the cells but by day 5 only a thin rim of F.N. staining was present on the cells. But the basement membrane region and blood vessels was not decreased. These phenomenon were more striking by day 10 during the period of trophoblast invasion. The finding of this report suspects that F.N. has some originarity and each F.N. has its own parts and synthesized in mesenchyme.

215 The different expression and biosynthesis of glycolipids in human endometrium during the menstrual cycle. M.Mikami, S.Nozawa, K.Takamatu, Y.Kobayashi, K.Tukazaki,* K.Kiguchi, S.Izumi, F.Tutui, S.Tamura, R.Iizuka, Dept. Obst.and Gynec., Keio Univ.Sch.Med., Tokyo, *Dept.Obst.and Gynec., Saitama Natl.Hosp., Saitama.

The expression of glycolipids (GSLs) on the cell surface is closely associated with cellular proliferation, differentiation and morphogenesis. We have already reported the characteristic expression of sulfatide (one of the acidic GSLs) in the secretory (S) phase of human endometrium. The present study is devoted to the synthesis of sulfatide and the quantity of neutral GSLs in the endometrium. The synthesis of sulfatide was analyzed by metabolic labeling with ^{35}S-PAPS. The rate of incorporation of ^{35}S into sulfatide in S phase was higher than that in the proliferative (P) phase, indicating that sulfotransferase activity for the synthesis of sulfatide is more active in S phase than in P phase. As to neutral GSLs, CMH, CDH and CTH in P phase have two bands, while those in S phase have three bands. The structure of the lowest bands, which appeared dramatically in S phase, were analyzed with FABMS. They proved to consist of the hydroxylated ceramide. These data suggest that the synthesis of ceramide as well as sulfatide is controlled under hormonal regulation in the endometrium.

216 Changes in glycolipids composition in the development of mouse mammary glands. M.Momoeda, Y.Taketani, M.Mizuno, Dept. Obst. and Gynec., Univ. of Tokyo, Tokyo.

GM3 and GD3, major glycolipid components in human milk, are known to increase and decrease respectively along with lactational period. In this study we analyzed the glycolipids composition of mouse mammary glands throughout gestation and lactational period. Glycolipids from mammary glands of mouse at various reproductive stages were extracted and purified. Their amount were analyzed by TLC and TLC immunostaining. The amount of GM3 decreased in early lactational period, and then increased toward late lactational period, whereas the amount of GD3 changed in a reciprocal way of GM3. These changes were reflected those in human milk during lactation. The amount of both GD1a and GD1α exhibited the most striking changes during developmenal process. The former and its precursors decreased from late gestation to lactational period, while the latter and its precursors increased at lactational period. In summary, drastic changes in glycolipids composition are going on during developmental process of mammary glands, thus suggesting the physiological significance of glycolipids in the development of mammary glands. These changes may be regulated by a few particular enzymes involved in the synthesis of glycolipids.