75 Stimulation of early embryonic development in the mouse by coculture with rabbit oviduct epitherial cells. S.Saito, T.Katsumi, H.Matsushima, T. Furukawa, K.Momose, 1st. Dept. and Gynec., Toho Univ. Sch. Med., Tokyo.

The objective was to determine the effect of coculture on the cleavage of early ICR mouse embryos in vitro. Pronucleate embryos were cocultured for 120 h in medium Whitten and Whittingham (BWW) supplemented with or without 0,4% bovine serum alubumine (BSA) in the absence or presence of rabbit oviduct epitherial cells and crossed medium (50% culture medium from oviduct epitherial cells + 50% BWW medium supplimented BSA). After 120 h of culture, pronucleate mouse embryos developed into blastocyst more frequency ($p<0,01$) in coculture with oviduct epitherial cells than in the control group (BWW+BSA) cultured without oviduct epitherial cells. In the control group most embryos arrested development at the 2-cell embryos. Pronucleate mouse embryos cultured in oviduct epitherial cells without BSA cleaved into blastocyst more times than did embryos cultured in BWW alone. When cultured in BWW medium alone, embryos did not cleave into blastocyst. No difference in cleavage was observed between embryos cultured in crossed medium and embryos cultured in BWW+BSA medium. It is concluded that oviduct epitherial cells release one or several unknown compound(s) normally present in vivo, promoting the cleavage of pronucleate mouse embryos.

76 Prolactin inhibits plasmin activity in the preovulatory follicles in the preovulatory follicles in the ovulatory follicles. Y.Ubutaka, Y.Nakamura, Y.Yoshimura, H.Yamada, M.Ando, M.Karube, T.Nanno, M.Suzuki, Dept. Obst. and Gynec., Kyorin Univ. Sch. Med., Tokyo.

The present study was designed to determine the effects of PRL on plasmin activity in the preovulatory follicles. Rabbit ovaries were perfused with hCG alone or with hCG plus PRL at 10, 10^2, or 10^3ng/ml. The addition of PRL to the perfusate inhibited hCG-induced ovulation in vitro in a dose-related manner. Exposure to hCG in vitro enhanced α_2-plasmin inhibitor-plasmin complex (α_2PI-Plm) produced by the preovulatory follicles within 2 hours. The concentrations of α_2PI-Plm in the perfusate reached its maximum at 4 hours and then declined. A second peak occurred 8 hours after hCG administration. The alteration of α_2PI-Plm in the process of ovulation was comparable to the pattern of plasminogen activator activity in the follicles. The addition of PRL significantly inhibited hCG-stimulated increase in α_2PI-Plm at 4 hours following hCG exposure in a dose-dependent manner. In conclusion, PRL may act directly interfering with mechanical events within the ovary that are required for the rupture of mature Graafian follicles, probably via the inhibition of intrafollicular Plm activity.

77 Analysis of Proliferative potential of trophoblast Using anti-PCNA/cyclin Monoclonal Antibodies in Fixed,Embedded tissue. H.Mohtai, F.Eguchi, M.Yuuki*,M.Kikuchi*,K.Shirakawa,Dep.Obst.and Gynec.,*Dep.of 1st. Pathology, Fukuoka Univ.Sch.Med.,Fukuoka.

To analyze the proliferative potential of trophoblast, we used flow cytometry(FACScan, BECTON DICKINSON), anti-PCNA/cyclin(PCNA)(AMERICAN BIOTECH) monoclonal antibody which reacts with nuclei of proliferating cells and image analysis of AgNORs. Results of flow cytometric analysis showed that the percentage of S phase was lessened as the gestational week progressed. So we thought that proliferative potential of placenta decreased according as gestational week progressed. Villous syncytiotrophoblast(ST) was uniformly unreactive with PCNA but a proportion of the underlying cytotrophoblast(CT) was uniformly reactive with PCNA-positive throughout pregnancy. In the analysis of AgNORs, average number of dots of Nuclear Organizer Regions(NORs) on one nuclei in CT were greater than that of ST and average areas of one dot in CT were smaller than that of ST throughout pregnancy. In conclusion, we thought that proliferative potential of placenta decreased according as the number of CT cells which decreased in accordance with progress of pregnancy.