244 A study on chemotaxis movements of fertilized ova for Laminine pentapeptide in rats. N.Nishi, T.Kawamura, M.Taguchi, S.Kamada, T.Kubota, T.Aso, Dept. Obst. and Gynec., Tokyo Med. and Dent. Univ. Sch. Med., Tokyo.

To investigate possible contribution of Laminine pentapeptide to the establishment of implantation of rat fertilized ova, uterine intra-muscular as well as intra-cavum injection with peptide were given on Day 4 of pregnancy and the number of viable sites were counted. Laminine elaborated in the uterine epithelial layer taken from none pregnant and pregnant rats were stained by A B C method using antiserum against Laminine extracted from rat York-Sac tumor. Following intramuscular injection, number of pups were increased compared to contralateral horn and cluster formation around injection sites were observed. Number of pups were decreased following intra-cavum injection with the same peptide. Remarkable staining was observed in the epithelial layer from Day 4 of pregnancy. Results indicate, rat fertilized ova anchor to the sites by way of chemotaxis movements for Laminine pentapeptide YIGSR.

245 Physiologically Significant Inhibitory Hypothalamic Action of Substance P on Prolactin Release in the male rat. M.Arisawa, N.Inagaki, K.Hukuba, M.Kogima, H.Mochimaru, Dept.Obst. and Gynec., Hiratsuka City Hospital, Kanagawa

To evaluate a physiological role of substance P(SP) in the control of prolactin(PRL) release, conscious male rats were given injections of specific antiserum against SP intraventricularly(IVT) and intravenously (IV). IVT injection of antiserum(3µl) induced a significant increase in plasma PRL($P<0.02$) although large dose of antiserum(0.5ml) had no effect after IV injection. The effect was observed 2hr after injection and levels remained elevated for 4hr. To confirm the effect of SP, synthetic SP was injected IV and IVT. Biphasic effect of SP was observed after IV and IVT injection. Large dose of SP(50µg) dramatically stimulated PRL release ($P<0.001$), whereas low dose(0.1µg) has an opposite effect($P<0.005$) after IV injection. IVT injected SP(5 or 1µg) revealed stimulatory effect on PRL release($P<0.01$), whereas low dose (10ng) of SP suppressed PRL release ($P<0.01$). On the other hand, the release of PRL from incubated anterior pituitary cells was not affected at any dose of SP in vitro. These data indicate that in the male rat endogenous SP is a physiologically significant inhibitor of basal release of PRL,via hypothalamic action.

246 Effects of intracellular Ca^{2+} and C-kinase on prolactin release from human decidual cells in early pregnancy. T.Kubota, S.Kamada, M.Taguchi, Y.Ozaki, N.Nishi, T.Aso. Dept.Obst.and Gynec.,Tokyo Medical and Dental Univ. Fac.Med., Tokyo.

The present study was undertaken to investigate the effect of modulation of intacellular Ca^{2+}concentration ($[Ca^{2+}]_i$) and activation of protein kinase C (PKC) on the prolactin (PRL) release from human decidua.

The human decidua and villi in early pregnancy were enzymatically dispersed, and were cultured for 72 hours. PRL and hCG concentrations in the media were measured by specific EIAs. The PRL level released from decidual cells in the control (130.1 + 1.9 ng/ml/24h, Mean + SD) was significantly greater ($p<0.001$) than that in 10^{-7}M Ca^{2+}ionophore (INP), Ca^{2+}mobilizer, (109.3+5.2), and that in 10^{-6}M PMA, PKC activator,(114.2 + 0.7). These effects of Ca^{2+}INP and PMA were in the dose dependent manner. H-7, the inhibitor of PKC, diminished the effect of PMA on this PRL release. On the other hand, 10^{-7}M Ca^{2+}INP had no significant effect on villous hCG release and 10^{-6}M PMA enhanced significantly ($p<0.05$) this hCG release. 10^{-7}M Ca^{2+} INP slowly increased $[Ca^{2+}]_i$, measured by fura-2 AM methods, to cause a sustained stimulation, but PMA had no effect on $[Ca^{2+}]_i$ in the decidual cells. Hence, it was indicated that PRL releasing mechanism in decidua had tight connection with $[Ca^{2+}]_i$ change through Ca^{2+} channel and with PKC activation, but different from hCG releasing system in villi.