502 Effect of GnRH agonist leuprolide acetate depot on steroid receptors in leiomyoma and myometrium. Y.Watanabe, G.Nakamura, M.Sano, M.Nozaki, M.Yokoyama, Y.Uchiumi, K.Nagura*, H.Nakano. Dept.Gynec.and Obst.,Fac.of Med.,Kyushu Univ.,Fukuoka, *Research and Develop.Dept., Hamura Labo.,Teijin Biolaboratories,Tokyo.

To investigate the role of estrogen and progesterone receptors(ER,PR) in the regulation of the growth of leiomyoma, ER and PR contents were measured in leiomyoma and myometrium from women treated with GnRH agonist(GnRH-a) compared with controls. Tissue was obtained from 56 premenopausal women with uterine leiomyoma who were received leuprolide acetate depot 1.88mg or 3.75mg subcutaneously every 4 weeks for six injections(n=40) or no treatment(n=16) before hysterectomy or myomectomy. The mean ER and PR contents were not significantly different between leiomyoma and myometrium in control group. The mean ER content in leiomyoma in GnRH-a treated group was significantly greater than in control(785.9±64.7 versus 499.1±78.0 fmol/mg), though the mean myometrial ER content showed no difference. The mean PR content in leiomyoma and myometrium showed a significant decrease after GnRH-a treatment. These results suggested that there was no correlation between GnRH-a induced shrinkage of leiomyoma and ER content.

503 Concentration of Mn-SOD and Cu,Zn-SOD in peritoneal fluids of patients with endometriosis. S.Saitoh,M.Ishikawa,K.Tamate,K.Sengoku, H.Kimura,T.Shimizu, Dept.Obst.and Gynec., Asahikawa Med. College, Hokkaido.

In the present study we investigated the kinetics of superoxide dismutase (SOD) and its relations to endometriosis. We measured Mn-SOD and Cu,Zn-SOD in peritoneal fluid and blood serum by an ensyme linked immunosorbent assay (ELISA). The levels of Mn-SOD was higher in the peritoneal fluid samples compared to the level in blood serum in all groups (no endometriosis, endometriosis interna and endometriosis externa). The serum Mn-SOD concentration in cases with endometriosis interna (97.7 ± 28.1 ng/ml) was higher compared to that in endometriosis externa cases (89.2 ± 21.1 ng/ml). In peritoneal fluids, Mn-SOD was higher in endometriosis interna cases (233.8 ± 106.9 ng/ml) compared to cases with endometriosis externa (161.2 ± 16.7ng/ml). In patients with endometriosis interna the Mn-SOD was localized in the ectopic endometrial gland by immunohistochemical methods. These findings help to elucidate the pathogenetic differences between endometriosis interna and endometriosis externa.

504 Immunohistochemical localization of c-erbB-2 protein and epidermal growth factor receptor in normal tissues of the female genital tract and the placenta. Y.Nanbu, DP.Wang, H.Nonogaki, T.Iwai, I.Konishi, S.Fujii, T.Mori, M.Kinoshita*, Dept. Gynec. and Obst., Faculty of Med., Kyoto Univ., *Dept. Obst. and Gynec., Kyoto Katsura Hosp.

C-erbB-2 protein is a membrane glycoprotein which has been considered as a growth factor receptor having molecular homology with epidermal growth factor receptor (EGFR). To analyze the relationship between the expression of c-erbB-2 protein and EGFR in the female genital tract and placenta, immunohistochemical reactivities with the respective monoclonal antibodies were examined. In the mullerian-derived genital tract such as fallopian tube, endometrium, and endocervix, epithelial cells were positive for c-erbB-2 protein but negative for EGFR, whereas stromal cells were negative for c-erbB-2 protein but positive for EGFR. In addition, the staining intensity for EGFR in endometrial stromal cells increased with decidualization. In the placental tissues, cytotrophoblasts and syncytiotrophoblasts of chorionic villi were negative for c-erbB-2 protein but positive for EGFR. In contrast, intermediate trophoblasts in the extravillous space were positive for c-erbB-2 protein but negative for EGFR. These results suggest the inverse relationship between the expression of c-erbB-2 protein and EGFR, both of which may be involved in the differentiation and/or function of the cells, in the female genital tract and the placenta.