

475 Mouse pre-embryo survival after using different biopsy techniques: models for pre-embryo genetic diagnosis. K.Takeuchi*^{***}, Y.Nagata**, GD.Hodgen*, *The Jones Institute for Reproductive Medicine, Eastern Virginia Medicine School, U.S.A., **Dept. Obst. and Gynec., Fac. of Med., Kagoshima Univ., Kagoshima.

The survival rate among pre-embryos following biopsy by micromanipulation, and subsequent normal development are the critical pre-clinical test in the successful development of human pre-embryo genetic diagnosis. The embryonic survivals of biopsied 4-cell and 8-cell stage mouse embryos were investigated, using three different methods: enucleation (EN), single whole blastomere aspiration (A) and extrusion (EX) of a blastomere. In Control (C), (EN), (A) and (EX) group, the expanded blastocyst formation rates from 4-cell pre-embryos were 94.6%, 80.7%, 91.7%, 90.3%, respectively. There were no significant differences among them. Biopsied and control embryos were transferred into the oviducts of recipient mice, on day 1 of pseudopregnancy. Aspiration and extrusion techniques were superior to the enucleation technique based on the live-birth rate. The fetal body weight at birth day in (C), (EN), (A), (EX), were 1.60 ± 0.02 , 1.60 ± 0.03 , 1.59 ± 0.01 , respectively, and no abnormalities were found in babies of any biopsied groups.

476 Restriction Fragment Length Polymorphisms Analysis of carrier determination of Duchenne muscular dystrophy in Japanese families. S.Katayama, T.Ubagai *, N.Takeshita, T.Yano, Y.Abe, A.Usui, H.Kubo, K.Momose, H.Amano* *, Dept. Obst. and Gynec., Dept. Microbiology*, Dept. Biochemistry* *, Toho Univ. Sch. Med., Tokyo.

DNA analysis was done on 18 unrelated families to examine the usefulness of Restriction Fragment Length Polymorphisms (RFLPs) analysis for determination of carrier status of Duchenne muscular dystrophy (DMD) in Japanese families. DNA was extracted from peripheral white blood cells and digested with appropriate enzyme followed by electrophoresis into 1% agarose gels. DNA was transferred from the gel to nylon membrane and it was hybridized to the nick translated pERT 87 probes. Intragenic genomic probes of pERT 87 with subclone 87-1, 87-8 and 87-15 were used together with BstXI, TaqI, XmnI, BstNI, BamHI and MspI. Autoradiogram was made after overnight exposure for RFLPs analysis. Carrier status could be determined in 16 out of 18 (89%) clients at-risk for DMD carriers from 18 families, the carrier status of the rest two clients (11%) could not be determined with 8 testings, almost consisting with the informative rate on Caucasians. Deletions were not detected in 16 males with DMD. Recombinations were not found in 119 members analysed. Present study exemplifies the usefulness of RFLPs analysis with pERT 87 genomic probes in Japanese families with DMD.

477 Morphological Finding and Endocrinology of Luteal Phase Endometrium in Ovarian Hyperstimulation. Y.Shimizu, Y.Utsumi, T.Sato, H.Irie, E.Yamada, K.Yamagata, T.Norisugi, F.Nakamura, Tokyo Medical College.

Measurements were made, by RIA method, of dated endometrial diagnosis, blood E₂ and P in 7-8 days after confirming ovulation in 50 cases in the Spontaneous Ovulatory Cycles (S group), 30 cases in the clomiphene treated cycles (C group) and 15 cases in HMG-HCG treated cycles (H group). The results of dated endometrial diagnosis were: 27 cases of agreed type (54%), 17 cases of delayed type (34%), 6 cases of separated type (12%) in S group, and in C and H groups, the results were: 12 (40%) and 9 (60%) cases of agreed type, 15 (50%) and 6 (40%) cases of delayed type and 3 (10%): 0 (0%) cases of separated type, respectively.

1. Regarding the morphology of the endometrium in the implantation phase, there were many cases which showed agreed type both in the gland and stroma, and in C group, there were many cases which exhibited delayed type both in the gland and stroma. 2. In S group, the mid secretory phase of the blood E₂ and P values in the middle luteal phase could become the indices for estimating the morphology of the endometrium, but no endocrine analysis which suggests the factor of developing the endometrium with abnormal morphology could be grasped in C and H groups.