10 *In Vitro/In Vivo* Development of Mouse Oocytes Vitrified by EFS

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Mouse oocytes were cryopreserved by the vitrification method using EFS30, 35, 40 (30, 35, 40% ethylene glycol, 0.5M sucrose and 18% ficoll in M2) and were examined the effects of dilution methods on the rate of *in vitro* development. After thawing and dilution of the cryoprotectant, oocytes of normal morphology were inseminated, the rates of fertilization, development *in vitro* and cell number of blastocysts were examined. For vitrification and toxicity test, oocytes were exposed to M2 solution containing 10% ethylene glycol for 10 min. and transferred to EFS for 30 sec, they were then cooled rapidly in liquid nitrogen. The highest cleavage rates were obtained in EFS35 (40.5%) and 2-step dilution method (50.0%) when oocytes were exposed to M2 containing 0.5 M sucrose and then fresh M2 for 5 min., respectively. The development rate of vitrified-thawed oocytes to the blastocysts stage after *in vitro* fertilization (92.9%) was not significantly different compared to that of control (80.0%). Also, the mean number of cells per blastocysts (85.6 ± 15.3) was similar to that of the control (101 ± 18.6). Development *in vivo* was assessed by transferring blastocysts derived from vitrfied-thawed oocytes into the uterine horns of day 3 pseudogregnant female recipients. Transfer of the blastocysts resulted in fetal development (44.9%) and implantation rates (81.2%) similar to those of the control (50.0, 75.0%). These results suggested that mouse oocytes could be vitrified using cryopreservation solution (EFS35) based on ethlyene glycol.

11 A Study of HSP70A and HSP70B Gene Expression in Testis Tissue of Azoospermia Men Without DAZ Deletion; HSP70B as a maturation arrest factor in spermatogenesis

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Spermatogenesis is known to be regulated by a number of genes and several factors such as hormones, growth factors, cytokines and others. This study was done to evaluate the relationship between HSPs and DAZ genes in human spermatogenesis; we observed the expression pattern of HSP gene in azoospermia men with DAZ gene that regulated the gene expression related with