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Pleiotropic factors associated with recurrent spontaneous abortion

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Recent studies indicate that a number of factors including chromosomal abnormalities, immunological feto-maternal rejection, hormonal irregulation and anatomical factors are involved in provoking recurrent pregnancy loss (RPL). This indicates that normal cellular regulation of these factors is required for maintaining normal pregnancy. In addition, it is expected that biological processes for maintaining normal pregnancy require a series of differential gene expression. As expected, our previous investigations revealed that there are 30 genes showing different levels of expression between normal and RPL patients. In addition, other research groups have also identified a number of genes that are expressed aberrantly in pregnancy failure. In this review, recent study on aberrant expression levels of genes, which are grouped as immunity-related, angiogenesis-related, apoptosis-related and other groups of genes, will be discussed.

S3-04

Biological Functions of Dazl, a Male Infertility Gene

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A substantial portion of male infertility is caused by genetic defects. Micro-deletions at specific loci of the Y chromosome have been observed frequently in male infertility patients, suggesting that genes in these regions are involved in male germ cell development. However, specific cellular functions of these infertility gene products remained to be elucidated. *DAZ* is a representative male infertility gene at the *AZFc* locus of the Y chromosome. We carried out yeast two-hybrid screening with Dazl, a mouse homologue of DAZ, as bait, and isolated a number of candidate Dazl-interacting protein genes. Among them, we focused Dazl interaction with dynein light chain. Our results from a number of biochemical and cell biological analyses support the notion that Dazl mediates transport of specific mRNAs through the dynein complex.