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## Identification of Supporting Factors for Human Embryonic Stem Cells Maintenance in Feeder Cells

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**Background & Objectives:** Maintenance of human embryonic stem cells (hESCs) is necessary for their support of feeder cells like mouse embryonic fibroblasts (MEFs). Thus, studies on feeder cell in hESCs research have been actively investigating to set a goal of establishment of human feeder cell line and feeder-free or xeno-free culture system. However, accurate supporting mechanism or factors of feeder cell in hESCs are poorly understood up to date. We investigated for the purpose of searching unidentified supporting factors of feeder cells.

**Method:** For this experiment, as we selected two feeder cell lines (MEF and STO), it made a comparative study of the difference between induced mitotic arrest and activity groups. For search differentially expressed genes between both groups, we examined using modified Differential Display RT-PCR method (GeneFishing technique), and repeated this experiments three times to each sample.

**Results:** We performed using 20 of different primers, observed the expression pattern of diverse bands between two groups. We selected 34 genes differentially expressed between two groups including cell-line specific band. For further identification, we eluted them from the gels and sequenced.

**Conclusions:** In conclusion, the expression patterns of two lines in general were similarly observed, but some differentially expressed bands of each line were identified.

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## Effect of Glucose Concentrations on Human Embryonic Stem Cell Culture

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**Background & Objectives:** Regeneration therapy is among the most promising approaches currently