

## P-21 Amniotic Fluid Cells Enhance the Differentiation of Umbilical Cord Blood CD34+ Cells into Dendritic Cells

Bae IH<sup>1</sup>, Kim J<sup>1</sup>, Kim H<sup>1</sup>, Chung HY<sup>2</sup>, Kim KS<sup>3</sup>, Rho WJ<sup>4</sup>,  
Kim HO<sup>5</sup>, Kim SK<sup>6</sup>, Cho DJ<sup>6</sup>, Lee SY<sup>7</sup>

<sup>1</sup>Department of Biotechnology, Seoul Women's University, <sup>2</sup>Department of Microbiology, School of Medicine, Hanyang University, <sup>3</sup>Bioengineering Institute, Corestem, <sup>4</sup>Dr. Roh's OB&GYN Clinic, <sup>5</sup>Department of Laboratory Medicine, Severance Hospital, <sup>6</sup>Department of Obstetrics and Gynecology, School of Medicine, Yonsei University, <sup>7</sup>KT Biosys Inc.

**Background & Objectives:** To develop a method to enhance the differentiation of CD34+ cells into dendritic cells by coculture with amniotic fluid cells.

**Method:** Amniotic fluid cells (AFC) were obtained from the amniotic fluid at 20 weeks of pregnancy. After extended subcultures, fibroblast-like cells were isolated and used for the coculture. CD34+ cells were isolated from the cord blood at full-term delivery using miniMACS separation system. They were cultivated alone or co-cultivated with AFC in RPMI-1640 containing 10% FBS, 50 ng/ml GM-CSF, 20 ng/ml IL-4, 25 ng/ml SCF and 20 ng/ml TNF- $\alpha$ . After culture for 2 weeks, cells were analyzed by FACS and Mixed Lymphocyte Reaction (MLR).

**Results:** After 4 passages, homogeneous population of fibroblast-like cells was obtained from the amniotic cells. RT-PCR analyses showed the expression of SCF, BMP-4, nestin, ADAM-12, FGF-5, vimentin, AFP and CK18 genes. When CD34+ cells were induced to differentiate into dendritic cells, total number of cells grown in the presence of AFC was greater by more than 2.6 fold compared to that in the absence of AFC. A similar percentage of differentiation, as analyzed for CD80, CD86, CD83, CD40 and HLA-DR markers, was shown in both cells cultivated alone and cocultured with AFC. Results of MLR analyses also showed a similar ratio of thymidine labeling, indicating little difference of dendritic cell differentiation between two culture methods.

**Conclusions:** AFC could enhance the differentiation of CD34+ cells into dendritic cells by significantly increasing the proliferation of CD34+ cells.

## P-22 HIDE, a Testis Specific Deubiquitinating Enzyme, Interacts with HSP90

Seong M, Kim MS, Kim YS, Kim YK, Shin JM, Lee H,  
Chung HM, Baek KH

Graduate School of Life Science and Biotechnology, Cell and Gene Therapy Research Institute, Pochon CHA University, CHA General Hospital, Seoul 135-081, Korea

**Background & Objectives:** Ubiquitination and deubiquitination are one of important protein modifica-